

26607

REMEDIAL SITE ASSESSMENT DECISION - EPA REGION IV

Site Name: Sea Galley/Galley Hall Club

EPA ID#: SCD 987566452

Alias Site Names: _____

City: Hanahan

County or Parish: Berkeley

State: SC

Refer to Report Dated: June 30, 1995

Report type: SI

Report developed by: SCDHEC

DECISION:

☒ 1. Further Remedial Site Assessment under CERCLA (Superfund) is not required because:

☒ 1a. Site does not qualify for further remedial site assessment under CERCLA (No Further Remedial Action Planned - NFRAP) ☐ 1b. Site may qualify for further action, but is deferred to: ☐ RCRA ☐ NRC

☐ 2. Further Assessment Needed Under CERCLA: 2a. (optional) Priority: ☐ Higher ☐ Lower

2b. Activity ☐ PA ☐ ESI
Type: ☐ SI ☐ HRS evaluation

☐ Other: _____

DISCUSSION/RATIONALE:

Removal was completed, no contaminants detected on site, no known receptors.

Report Reviewed

and Approved by: Ralph O. Howard, Jr.

Signature: Ralph O. Howard, Jr.

Date: 7-25-95

Site Decision



Made by: Ralph O. Howard, Jr.

Signature: Ralph O. Howard, Jr.

Date: 9-25-95

NFRAP
Ralph O. Howard
9-25-95

**SEA GALLEY CLUB/GALLEY HALL
SITE INVESTIGATION
BERKELEY COUNTY
SCD 987 566 452**

Completed By: Greg George 
Reviewed By: Susan Kuhne 
Site Screening Section
Bureau of Solid & Hazardous Waste Management
South Carolina Department of Health & Environmental Control
2600 Bull Street
Columbia, SC 29202

Date Completed: June 30, 1995

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I. SCOPE OF WORK

Under authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), the Site Screening Section, SCDHEC conducted a Site Investigation (SI) at the Sea Galley Club/Galley Hall site in Berkeley County, South Carolina. The purpose of this investigation was to determine the need for additional CERCLA/SARA or other appropriate action. The scope of the investigation included a review of available file information, a site reconnaissance and sampling trip, and a thorough target survey.

II. INTRODUCTION/EXECUTIVE SUMMARY

The Sea Galley Club/Galley Hall site is located four miles north of Hanahan, in Berkeley County, South Carolina. The site is presently owned and operated by Jasin Travis. The site has always been used as a night club and bingo parlor.

In 1987, the property owner unknowingly stored hazardous materials on-site for approximately six months. A man posing as a highway department worker asked Mr. Travis' permission to temporarily store some drums on the property. After disposing of approximately sixty drums of paint wastes and solvents, the man was never seen again. In March of 1988, the drums were removed along with some soil and disposed of properly at a nearby incinerator facility. No other waste activities have occurred at the site.

Soil samples collected for the purposes of this investigation detected no elevated levels of contaminants at or around the site. No groundwater samples were collected since groundwater is not used for public/private supply within four miles of the site. One sediment sample was collected from an adjacent wetlands area. The analytical results indicated no contaminants present in this area. The total population within four miles of the site is 51,783; however, there are no residents or day care facilities within 200 feet of the site.

The Sea Galley Club/Galley Hall site is given a "low" priority for further Federal action due to a lack of contamination detected on-site and the overall lack of targets. Removal activities conducted at the site have been completed and no further remedial work at the site is planned.

III. SITE DESCRIPTION, HISTORY, AND WASTE CHARACTERISTICS

A. Ownership History

| <u>Date</u> | <u>Owner</u> | <u>Land Use</u> |
|-------------------|------------------|-----------------------------------|
| ◀ Prior to 1985 | Unknown | Undeveloped Woodland |
| ◀ 1985 to Present | Mr. Jasin Travis | Night Club/Temporary Drum Storage |

Contact:

Jasin Travis

(b)(6) Personal Privacy

(Ref. 12)

B. Site Location and Description

The Sea Galley Club/Galley Hall site is located approximately four miles north of Hanahan in Berkeley County, South Carolina. It is located on Eagle Road on the edge of a commercialized area adjacent to a low-lying wetlands area. The site coordinates are 32 degrees 58 minutes 4.6 seconds north latitude, and 80 degrees 00 minutes 16.7 seconds west longitude (Ref. 1).

The total area of the property is approximately three acres (Ref. 1, 12). The on-site structures include one large corrugated metal building, a storage trailer for liquor and beer, and two paved parking lots. A night club and bingo parlor occupy the building. The property is not surrounded by a maintained fence (Ref. 11). The topography is generally flat with a slight slope westward towards the wetlands (Ref. 1, 11).

C. Site History and Waste Characteristics

The facility has been in operation as a night club and bingo parlor since the mid-1980s. No hazardous waste practices are presently associated with the facility; however, in 1987, the property owner unknowingly stored hazardous materials on-site for approximately six months. A man posing as a highway department worker asked Mr. Travis' permission to temporarily store some drums on the property. After disposing of approximately sixty drums of paint wastes and solvents, the man was never seen again. In March of 1988, the drums were removed by Willms Trucking Co. along with some soil and disposed at Thermo Organic Co. in Spartanburg, South Carolina. No other waste activities have occurred at the site (Ref. 12). Samples taken from the drums before removal revealed high levels of VOCs in five of the drums (Ref. 11, 12).

The Sea Galley Club/Galley Hall site was sampled on October 27, 1994 for the purposes of this report. Five soil samples and one duplicate sample were collected on and around the site (see figure in reference 11). Analytical results revealed no residual soil contamination in the former drum storage area (Ref. 4, 11).

IV. GROUNDWATER PATHWAY

A. Regional Hydrogeology

The following geologic units underlie the site (Ref. 3):

| Table I: Regional Hydrology at the Sea Galley Club/Galley Hall Site. | | |
|---|---|---------------------|
| Name of Formation | Description | Depth of Occurrence |
| Shallow Sediments | Heterogeneous mixture of sand, silt, clay, and shells | 0-25 Ft. |
| Cooper | Sandy phosphatic olive-green to brown dense limestone | 25-225 Ft. |
| Santee Limestone | Light colored fossiliferous limestone | 225-375 Ft. |
| Black Mingo | Sand interbedded with clay | 375-800 Ft. |

(Ref. 3)

The unsaturated zone is likely to consist dominantly of sand and clay. Sediments of this composition have an estimated hydraulic conductivity of 10^{-3} to 10^{-6} cm/sec. Based on topographic relief and surface drainage, the depth to groundwater is estimated to be between five and twenty five feet. The Cooper is a regionally recognized laterally extensive deposit of low hydraulic conductivity that likely restricts the vertical migration of groundwater (Ref. 3). The net precipitation for this area of South Carolina is between 15 and 30 inches per year (Ref. 8).

B. Groundwater Targets

Based on current information, all areas are served by Charleston City or Mt. Pleasant water lines with upgradient intakes on the Edisto River and Goose Creek Reservoir (Ref. 1).

C. Analytical Results

A release to groundwater is not likely due to the lack of contamination detected in on-site soils (Ref. 4, 5). No groundwater samples were collected for the purposes of this report due to the overall lack of groundwater targets near the site (Ref. 1, 11).

V. **SURFACE WATER PATHWAY**

A. Regional Characteristics

Based on topographic maps and physical observations, overland drainage from the site flows westward towards a low-lying wetlands area. The low-lying area does not drain into nearby surface water features, thus completing the target distance limit (Ref. 1).

The Sea Galley Club/Galley Hall site is located outside the 100 year flood plain (Ref. 10). The 2 year-24 hour rainfall value is 4.25 inches for the center of Berkeley County (Ref. 7).

B. Surface Water Targets

There are no drinking water intakes located within the surface water pathway target distance limit (Ref. 2). The low-lying area is not capable of supporting a fishery and is not delineated as wetlands on the topographic map (Ref. 1). During the SI sampling trip, the low-lying area was saturated and contained wetlands vegetation (Ref. 5, 11). The wetlands area is approximately three acres, and the total wetlands frontage for this area is approximately 0.25 miles (Ref. 1). There are no state or Federally endangered species within the surface water pathway (Ref. 2, 13).

C. Analytical Results

One sediment sample was collected from the low-lying area west of the site (SG-005-SD). The sample was collected from the edge of the low-lying area within 10 feet of the former drum storage area (Ref. 5). No contaminants were detected at or above three times background soil levels (Ref. 4). A representative sediment background sample could not be collected due to the lack of an upgradient location.

VI. **SOIL AND AIR PATHWAYS**

The Sea Galley Club/Galley Hall site is not surrounded by a fence and is accessible from all directions (Ref. 11). The site is used for recreational purposes. No private residences are located on-site, and less than 15 employees work on-site (Ref. 1, 11). The site is currently active as a night club and bingo parlor, but no waste activities are currently occurring on-site (Ref. 11). Population figures for the four mile radius were estimated using 1990 U.S. census data (Ref. 6). Table II

contains the population estimates for each radius. No schools or day care facilities are located within 200 feet of the site (Ref. 11).

| Table II: Population Estimates within Four Miles of the Sea Galley Club/Galley Hall Site. | |
|--|------------|
| Radius (Miles) | Population |
| On-site | 0 |
| 0 - ¼ | 192 |
| ¼ - ½ | 3,613 |
| ½ - 1 | 8,701 |
| 1 - 2 | 8,912 |
| 2 - 3 | 8,973 |
| 3 - 4 | 21,392 |

(Ref. 1, 6)

Multiple state and Federally endangered species including three bald eagles are located within four miles of the site (Ref. 13). Large areas of wetland vegetation are found throughout the four mile site radius (Ref. 1). On-site soil samples contained no elevated levels of contamination (see waste characteristics section) (Ref. 4, 5).

VII. CONCLUSION AND RECOMMENDATIONS

Soil samples collected for the purposes of this report detected no elevated levels of contaminants at or around the site. No groundwater samples were collected since groundwater is not used for public/private supply within four miles of the site. One sediment sample was collected from an adjacent wetlands area. The analytical results indicated no contaminants present in this area. The total population within four miles of the site is 51,783; however, there are no residents or day care facilities within 200 feet of the site.

The Sea Galley Club/Galley Hall site is given a "low" priority for further Federal action due to a lack of contamination detected on-site and the overall lack of impacted targets. Removal activities conducted at the site have been completed and no further remedial work at the site is planned.

VIII. REFERENCES

1. USGS Topographic Maps, 7.5 minute series (Including waterline maps).

| | |
|----------------------|------|
| Mount Holly, SC | 1979 |
| Kittredge, SC | 1979 |
| Ladson, SC | 1979 |
| North Charleston, SC | 1979 |
2. South Carolina Heritage Trust, endangered species and well location printout detailing surface water uses, and endangered species near the Sea Galley Club/Galley Hall site. May 23, 1995. Copy attached.
3. Canova, Judy, SCDHEC, memorandum to John K. Cresswell, SCDHEC. The Sea Galley Club/Galley Hall site Hydrogeologic Review. January 10, 1990. Copy attached.
4. Sampling results from the October 27, 1994 sampling trip to the Sea Galley Club/Galley Hall site. Released from EPA December 8 and 13, 1994. Copies attached.
5. Greg George, SCDHEC, Trip Report for Sea Galley Club/Galley Hall site sampling trip. June 1, 1995. Copy attached.
6. United States Bureau of the Census. Housing Units by Occupancy Status, Total Population and Persons Per Household, 1990.
7. South Carolina Water Resources Commission, State Climatologist Rainfall Figures by County. Statistical 2-year, 24-hour rainfall for Horry County.
8. U.S. EPA, Hazardous Ranking System; Final Rule, 40 CFR Part 300. December 14, 1990.
9. SCDHEC, BSHWM. Printout of RCRA Listed Facilities. August, 1993. Available in Site Screening Section, BSHWM.
10. National Flood Insurance Program, Flood Insurance Rate Map. Berkeley County, South Carolina. Map Panel #360. September 30, 1983.
11. Greg George, SCDHEC, Sampling Plan for Sea Galley Club/Galley Hall site. October 14, 1994. Copy attached.
12. Young, Jaye E., SCDHEC, Preliminary Assessment Report, Sea Galley Club, SCD 987 566 452. June 21, 1990. Copy available at SCDHEC.

Sea Galley Club/Galley Hall Site
SCD 987 566 452
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13. Susan Kuhne, SCDHEC, population estimates and endangered species around the Sea Galley Club/Galley Hall site. June 15, 1995. Copy attached.

PREscore 3.0 - PRESCORE.TCL File 07/25/94
HRS DOCUMENTATION RECORD
Sea Galley Club/Galley Hall - 06/29/95

PAGE: 1

1. Site Name: Sea Galley Club/Galley Hall
(as entered in CERCLIS)
2. Site CERCLIS Number: SCD 987 566 452
3. Site Reviewer: Greg George
4. Date: 6/29/1995
5. Site Location: Goose Creek/Berkeley, SC
(City/County,State)
6. Congressional District:
7. Site Coordinates: Single

Latitude: 32°58'04.6"

Longitude: 080°00'16.7"

| | Score |
|---|-------|
| Ground Water Migration Pathway Score (Sgw) | 0.16 |
| Surface Water Migration Pathway Score (Ssw) | 0.42 |
| Soil Exposure Pathway Score (Ss) | 0.00 |
| Air Migration Pathway Score (Sa) | 2.62 |

| | |
|------------|------|
| Site Score | 1.33 |
|------------|------|

NOTE

EPA uses the terms "facility," "site," and "release" interchangeably. The term "facility" is broadly defined in CERCLA to include any area where hazardous substances have "come to be located" (CERCLA Section 109(9)), and the listing process is not intended to define or reflect boundaries of such facilities or releases. Site names, and references to specific parcels or properties, are provided for general identification purposes only. Knowledge regarding the extent of sites will be refined as more information is developed during the RI/FS and even during implementation of the remedy.

1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: Drums

| | |
|--|----------|
| a. Wastestream ID | |
| b. Hazardous Constituent Quantity (C) (lbs.) | 0.00 |
| c. Data Complete? | NO |
| d. Hazardous Wastestream Quantity (W) (lbs.) | 0.00 |
| e. Data Complete? | NO |
| f. Wastestream Quantity Value (W/5,000) | 0.00E+00 |

2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

| | | | |
|--|-------------------|----------|------|
| a. Source ID | | Drums | |
| b. Source Type | | Drums | |
| c. Secondary Source Type | | N.A. | |
| d. Source Vol.(yd3/gal) | Source Area (ft2) | 3245.00 | 0.00 |
| e. Source Volume/Area Value | | 6.49E+00 | |
| f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b) | | 0.00E+00 | |
| g. Data Complete? | | NO | |
| h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f) | | 0.00E+00 | |
| i. Data Complete? | | NO | |
| k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h) | | 6.49E+00 | |

| Source Hazardous Substances | Depth (feet) | Liquid | Concent. | Units |
|--------------------------------|-----------------|--------|----------|-------|
| Acetone | > 2 | YES | 2.9E+05 | ppm |
| Ethyl acetate | > 2 | YES | 1.1E+02 | ppm |
| Ethyl benzene | > 2 | YES | 1.3E+05 | ppm |
| Methanol | > 2 | YES | 1.8E+01 | ppm |
| Methyl ethyl ketone | > 2 | YES | 4.8E+04 | ppm |
| Methyl isobutyl ketone | > 2 | YES | 1.7E+05 | ppm |
| Methylene chloride | > 2 | YES | 3.0E+03 | ppm |
| Toluene | > 2 | YES | 8.8E+04 | ppm |
| Trichloroethane, 1,1,1- | > 2 | YES | 8.0E+02 | ppm |
| Xylene, m- | > 2 | YES | 5.7E+04 | ppm |

3. SITE HAZARDOUS WASTE QUANTITY SUMMARY

| No. Source ID | Migration Pathways | Vol. or Area Value (2e) | Constituent or Wastestream Value (2f,2h) | Hazardous Waste Qty. Value (2k) |
|---------------|-----------------------|----------------------------|--|---------------------------------------|
| 1 Drums | GW-SW-SE-A | 6.49E+00 | 0.00E+00 | 6.49E+00 |

WASTE QUANTITY

Sea Galley Club/Galley Hall - 06/29/95

4. PATHWAY HAZARDOUS WASTE QUANTITY AND WASTE CHARACTERISTICS SUMMARY TABLE

| Migration Pathway | Contaminant Values | HWQVs* | WCVs** |
|-------------------------|--------------------------------|--------|--------|
| Ground Water | Toxicity/Mobility 1.00E+02 | 10 | 6 |
| SW: Overland Flow, DW | Tox./Persistence 4.00E+01 | 10 | 3 |
| SW: Overland Flow, HFC | Tox./Persis./Bioacc. 2.00E+02 | 10 | 6 |
| SW: Overland Flow, Env | Etox./Persis./Bioacc. 2.00E+04 | 10 | 18 |
| SW: GW to SW, DW | Tox./Persistence 4.00E+01 | 10 | 3 |
| SW: GW to SW, HFC | Tox./Persis./Bioacc. 2.00E+02 | 10 | 6 |
| SW: GW to SW, Env | Etox./Persis./Bioacc. 2.00E+02 | 10 | 6 |
| Soil Exposure: Resident | Toxicity 0.00E+00 | 0 | 0 |
| Soil Exposure: Nearby | Toxicity 0.00E+00 | 0 | 0 |
| Air | Toxicity/Mobility 1.00E+02 | 10 | 6 |

* Hazardous Waste Quantity Factor Values

** Waste Characteristics Factor Category Values

Note: SW = Surface Water
 GW = Ground Water
 DW = Drinking Water Threat
 HFC = Human Food Chain Threat
 Env = Environmental Threat

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GROUND WATER MIGRATION PATHWAY SCORESHEET
Sea Galley Club/Galley Hall - 06/29/95

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| GROUND WATER MIGRATION PATHWAY Factor Categories & Factors | Maximum Value | Value Assigned |
|---|------------------|-------------------|
| Likelihood of Release to an Aquifer Aquifer: Shallow Sediments | | |
| 1. Observed Release | 550 | 0 |
| 2. Potential to Release | | |
| 2a. Containment | 10 | 10 |
| 2b. Net Precipitation | 10 | 3 |
| 2c. Depth to Aquifer | 5 | 5 |
| 2d. Travel Time | 35 | 35 |
| 2e. Potential to Release [lines 2a(2b+2c+2d)] | 500 | 430 |
| 3. Likelihood of Release | 550 | 430 |
| Waste Characteristics | | |
| 4. Toxicity/Mobility | * | 1.00E+02 |
| 5. Hazardous Waste Quantity | * | 10 |
| 6. Waste Characteristics | 100 | 6 |
| Targets | | |
| 7. Nearest Well | 50 | 0.00E+00 |
| 8. Population | | |
| 8a. Level I Concentrations | ** | 0.00E+00 |
| 8b. Level II Concentrations | ** | 0.00E+00 |
| 8c. Potential Contamination | ** | 0.00E+00 |
| 8d. Population (lines 8a+8b+8c) | ** | 0.00E+00 |
| 9. Resources | 5 | 5.00E+00 |
| 10. Wellhead Protection Area | 20 | 0.00E+00 |
| 11. Targets (lines 7+8d+9+10) | ** | 5.00E+00 |
| 12. Targets (including overlaying aquifers) | ** | 5.00E+00 |
| 13. Aquifer Score | 100 | 0.16 |
| GROUND WATER MIGRATION PATHWAY SCORE (Sgw) | 100 | 0.16 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

| SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT | Maximum Value | Value Assigned |
|---|------------------|-------------------|
| Likelihood of Release | | |
| 1. Observed Release | 550 | 0 |
| 2. Potential to Release by Overland Flow | | |
| 2a. Containment | 10 | 10 |
| 2b. Runoff | 25 | 1 |
| 2c. Distance to Surface Water | 25 | 25 |
| 2d. Potential to Release by Overland Flow [lines 2a(2b+2c)] | 500 | 260 |
| 3. Potential to Release by Flood | | |
| 3a. Containment (Flood) | 10 | 10 |
| 3b. Flood Frequency | 50 | 25 |
| 3c. Potential to Release by Flood (lines 3a x 3b) | 500 | 250 |
| 4. Potential to Release (lines 2d+3c) | 500 | 500 |
| 5. Likelihood of Release | 550 | 500 |
| Waste Characteristics | | |
| 6. Toxicity/Persistence | * | 4.00E+01 |
| 7. Hazardous Waste Quantity | * | 10 |
| 8. Waste Characteristics | 100 | 3 |
| Targets | | |
| 9. Nearest Intake | 50 | 0.00E+00 |
| 10. Population | | |
| 10a. Level I Concentrations | ** | 0.00E+00 |
| 10b. Level II Concentrations | ** | 0.00E+00 |
| 10c. Potential Contamination | ** | 0.00E+00 |
| 10d. Population (lines 10a+10b+10c) | ** | 0.00E+00 |
| 11. Resources | 5 | 5.00E+00 |
| 12. Targets (lines 9+10d+11) | ** | 5.00E+00 |
| 13. DRINKING WATER THREAT SCORE | 100 | 0.09 |

* Maximum value applies to waste characteristics category.
 ** Maximum value not applicable.

| SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT | Maximum Value | Value Assigned |
|---|------------------|-------------------|
| Likelihood of Release | | |
| 14. Likelihood of Release (same as line 5) | 550 | 500 |
| Waste Characteristics | | |
| 15. Toxicity/Persistence/Bioaccumulation | * | 2.00E+02 |
| 16. Hazardous Waste Quantity | * | 10 |
| 17. Waste Characteristics | 1000 | 6 |
| Targets | | |
| 18. Food Chain Individual | 50 | 0.00E+00 |
| 19. Population | | |
| 19a. Level I Concentrations | ** | 0.00E+00 |
| 19b. Level II Concentrations | ** | 0.00E+00 |
| 19c. Pot. Human Food Chain Contamination | ** | 0.00E+00 |
| 19d. Population (lines 19a+19b+19c) | ** | 0.00E+00 |
| 20. Targets (lines 18+19d) | ** | 0.00E+00 |
| 21. HUMAN FOOD CHAIN THREAT SCORE | 100 | 0.00 |

* Maximum value applies to waste characteristics category.
 ** Maximum value not applicable.

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 SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
 Sea Galley Club/Galley Hall - 06/29/95

| SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT | Maximum Value | Value Assigned |
|--|------------------|-------------------|
| Likelihood of Release | | |
| 22. Likelihood of Release (same as line 5) | 550 | 500 |
| Waste Characteristics | | |
| 23. Ecosystem Toxicity/Persistence/Bioacc. | * | 2.00E+04 |
| 24. Hazardous Waste Quantity | * | 10 |
| 25. Waste Characteristics | 1000 | 18 |
| Targets | | |
| 26. Sensitive Environments | | |
| 26a. Level I Concentrations | ** | 0.00E+00 |
| 26b. Level II Concentrations | ** | 0.00E+00 |
| 26c. Potential Contamination | ** | 3.00E+00 |
| 26d. Sensitive Environments (lines 26a+26b+26c) | ** | 3.00E+00 |
| 27. Targets (line 26d) | ** | 3.00E+00 |
| 28. ENVIRONMENTAL THREAT SCORE | 60 | 0.33 |
| 29. WATERSHED SCORE | 100 | 0.42 |
| 30. SW: OVERLAND/FLOOD COMPONENT SCORE (Sof) | 100 | 0.42 |

* Maximum value applies to waste characteristics category.
 ** Maximum value not applicable.

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GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
Sea Galley Club/Galley Hall - 06/29/95

| GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT | Maximum Value | Value Assigned |
|--|------------------|-------------------|
| Likelihood of Release to Aquifer Aquifer: Shallow Sediments | | |
| 1. Observed Release | 550 | 0 |
| 2. Potential to Release | | |
| 2a. Containment | 10 | 10 |
| 2b. Net Precipitation | 10 | 3 |
| 2c. Depth to Aquifer | 5 | 5 |
| 2d. Travel Time | 35 | 35 |
| 2e. Potential to Release [lines 2a(2b+2c+2d)] | 500 | 430 |
| 3. Likelihood of Release | 550 | 430 |
| Waste Characteristics | | |
| 4. Toxicity/Mobility/Persistence | * | 4.00E+01 |
| 5. Hazardous Waste Quantity | * | 10 |
| 6. Waste Characteristics | 100 | 3 |
| Targets | | |
| 7. Nearest Intake | 50 | 0.00E+00 |
| 8. Population | | |
| 8a. Level I Concentrations | ** | 0.00E+00 |
| 8b. Level II Concentrations | ** | 0.00E+00 |
| 8c. Potential Contamination | ** | 0.00E+00 |
| 8d. Population (lines 8a+8b+8c) | ** | 0.00E+00 |
| 9. Resources | 5 | 5.00E+00 |
| 10. Targets (lines 7+8d+9) | ** | 5.00E+00 |
| 11. DRINKING WATER THREAT SCORE | 100 | 0.08 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
Sea Galley Club/Galley Hall - 06/29/95

| GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT | Maximum Value | Value Assigned |
|--|------------------|-------------------|
| Likelihood of Release | | |
| 12. Likelihood of Release (same as line 3) | 550 | 430 |
| Waste Characteristics | | |
| 13. Toxicity/Mobility/Persistence/Bioacc. | * | 2.00E+02 |
| 14. Hazardous Waste Quantity | * | 10 |
| 15. Waste Characteristics | 1000 | 6 |
| Targets | | |
| 16. Food Chain Individual | 50 | 0.00E+00 |
| 17. Population | | |
| 17a. Level I Concentrations | ** | 0.00E+00 |
| 17b. Level II Concentrations | ** | 0.00E+00 |
| 17c. Pot. Human Food Chain Contamination | ** | 0.00E+00 |
| 17d. Population (lines 17a+17b+17c) | ** | 0.00E+00 |
| 18. Targets (lines 16+17d) | ** | 0.00E+00 |
| 19. HUMAN FOOD CHAIN THREAT SCORE | 100 | 0.00 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
Sea Galley Club/Galley Hall - 06/29/95

| GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT | Maximum Value | Value Assigned |
|---|------------------|-------------------|
| Likelihood of Release | | |
| 20. Likelihood of Release (same as line 3) | 550 | 430 |
| Waste Characteristics | | |
| 21. Ecosystem Tox./Mobility/Persist./Bioacc. | * | 2.00E+02 |
| 22. Hazardous Waste Quantity | * | 10 |
| 23. Waste Characteristics | 1000 | 6 |
| Targets | | |
| 24. Sensitive Environments | | |
| 24a. Level I Concentrations | ** | 0.00E+00 |
| 24b. Level II Concentrations | ** | 0.00E+00 |
| 24c. Potential Contamination | ** | 1.00E+00 |
| 24d. Sensitive Environments (lines 24a+24b+24c) | ** | 1.00E+00 |
| 25. Targets (line 24d) | ** | 1.00E+00 |
| 26. ENVIRONMENTAL THREAT SCORE | 60 | 0.03 |
| 27. WATERSHED SCORE | 100 | 0.11 |
| 28. SW: GW to SW COMPONENT SCORE (Sgs) | 100 | 0.11 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREscore 3.0 - PRESCORE.TCL File 07/25/94
 SOIL EXPOSURE PATHWAY SCORESHEET
 Sea Galley Club/Galley Hall - 06/29/95

PAGE: 8

| SOIL EXPOSURE PATHWAY Factor Categories & Factors RESIDENT POPULATION THREAT | Maximum Value | Value Assigned |
|--|------------------|-------------------|
| Likelihood of Exposure | | |
| 1. Likelihood of Exposure | 550 | 0 |
| Waste Characteristics | | |
| 2. Toxicity | * | 0.00E+00 |
| 3. Hazardous Waste Quantity | * | 0 |
| 4. Waste Characteristics | 100 | 0 |
| Targets | | |
| 5. Resident Individual | 50 | 0.00E+00 |
| 6. Resident Population | | |
| 6a. Level I Concentrations | ** | 0.00E+00 |
| 6b. Level II Concentrations | ** | 0.00E+00 |
| 6c. Resident Population (lines 6a+6b) | ** | 0.00E+00 |
| 7. Workers | 15 | 0.00E+00 |
| 8. Resources | 5 | 0.00E+00 |
| 9. Terrestrial Sensitive Environments | *** | 0.00E+00 |
| 10. Targets (lines 5+6c+7+8+9) | ** | 0.00E+00 |
| 11. RESIDENT POPULATION THREAT SCORE | ** | 0.00E+00 |

* Maximum value applies to waste characteristics category.

** Maximum value not applicable.

*** No specific maximum value applies, see HRS for details.

PREscore 3.0 - PRESCORE.TCL File 07/25/94
 SOIL EXPOSURE PATHWAY SCORESHEET
 Sea Galley Club/Galley Hall - 06/29/95

PAGE: 9

| SOIL EXPOSURE PATHWAY Factor Categories & Factors NEARBY POPULATION THREAT | Maximum Value | Value Assigned |
|--|------------------|-------------------|
| Likelihood of Exposure | | |
| 12. Attractiveness/Accessibility | 100 | 0.00E+00 |
| 13. Area of Contamination | 100 | 0.00E+00 |
| 14. Likelihood of Exposure | 500 | 0.00E+00 |
| Waste Characteristics | | |
| 15. Toxicity | * | 0.00E+00 |
| 16. Hazardous Waste Quantity | * | 0 |
| 17. Waste Characteristics | 100 | 0 |
| Targets | | |
| 18. Nearby Individual | 1 | 1.00E+00 |
| 19. Population Within 1 Mile | ** | 1.00E+01 |
| 20. Targets (lines 18+19) | ** | 1.10E+01 |
| 21. NEARBY POPULATION THREAT SCORE | ** | 0.00E+00 |
| SOIL EXPOSURE PATHWAY SCORE (Ss) | 100 | 0.00 |

* Maximum value applies to waste characteristics category.
 ** Maximum value not applicable.

| AIR MIGRATION PATHWAY Factor Categories & Factors | Maximum Value | Value Assigned |
|--|------------------|-------------------|
| Likelihood of Release | | |
| 1. Observed Release | 550 | 0 |
| 2. Potential to Release | | |
| 2a. Gas Potential to Release | 500 | 500 |
| 2b. Particulate Potential to Release | 500 | 0 |
| 2c. Potential to Release | 500 | 500 |
| 3. Likelihood of Release | 550 | 500 |
| Waste Characteristics | | |
| 4. Toxicity/Mobility | * | 1.00E+02 |
| 5. Hazardous Waste Quantity | * | 10 |
| 6. Waste Characteristics | 100 | 6 |
| Targets | | |
| 7. Nearest Individual | 50 | 2.00E+01 |
| 8. Population | | |
| 8a. Level I Concentrations | ** | 0.00E+00 |
| 8b. Level II Concentrations | ** | 0.00E+00 |
| 8c. Potential Contamination | ** | 4.70E+01 |
| 8d. Population (lines 8a+8b+8c) | ** | 4.70E+01 |
| 9. Resources | 5 | 5.00E+00 |
| 10. Sensitive Environments | | |
| 10a. Actual Contamination | *** | 0.00E+00 |
| 10b. Potential Contamination | *** | 0.00E+00 |
| 10c. Sens. Environments(lines 10a+10b) | *** | 0.00E+00 |
| 11. Targets (lines 7+8d+9+10c) | ** | 7.20E+01 |
| AIR MIGRATION PATHWAY SCORE (Sa) | 100 | 2.62E+00 |

* Maximum value applies to waste characteristics category.

** Maximum value not applicable.

*** No specific maximum value applies, see HRS for details.

Date: 05/23/95

S.C. DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL

BUREAU OF SOLID & HAZARDOUS WASTE

SITE BEING EVALUATED SEA GALLEY CLUB, 325735.0 LATITUDE 800005.0 LONGITUDE

THE SURFACEWATER SUPPLIES FOUND

THIS REPORT IS BASED UPON DATA PROVIDED BY THE S.C. WATER RESOURCES COMMISSION (02/92).

| TREATMENT WORKS NAME OWNERS IDENTIFICATION | STREAM NAME | LONGITUDE LATITUDE | SOURCE ID. | PUMP (GPM) TREATMENT (GPD) |
|---|-------------|-----------------------|------------|-------------------------------|
| NO SOURCES FOUND. | | - - 0 | | 0.0 |
| | | - - 0 | | 0.000 |

SOURCE IDENTIFICATION:

| | | | | |
|-----------------------|------------------|-------------------|--------------------|---------------|
| AQ - Aquaculture | IR - Irrigator | PT - Thermo-power | CO - Commerical | MI - Mining |
| ST - Sewage Treatment | GC - Golf Course | PH - Hydro-power | WS - Public Supply | IN - Industry |

Page 2

S.C. DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL
BUREAU OF SOLID & HAZARDOUS WASTE
SITE BEING EVALUATED SEA GALLEY CLUB, 325735.0 LATITUDE 800005.0 LONGITUDE
THE ENDANGERED SPECIES FOUND WITHIN 4 MILES
THIS REPORT IS BASED UPON DATA PROVIDED BY THE S.C. HERITAGE TRUST FOUNDATION (01/92).

| COMMON NAME SCIENTIFIC NAME | STATUS | LONGITUDE LATITUDE | DISTANCE FROM SITE | GRANK SRANK | DATE ADDED | TOPO MAP / COUNTY WHERE THE SPECIES IS LOCATED |
|--|--------|-----------------------|-----------------------|----------------|---------------|--|
| CHAFFSEED SCHWALBEA AMERICANA | NC/CU | 80-02-38 32-56-26 | 2.81 Miles WSW | G2 S2 | 05/20/57 | LADSON Charleston |
| BLUEFIN KILLIFISH LUCANIA GOODEI | UN | 80-00-04 32-59-27 | 2.15 Miles NNE | G5 S1? | 07/09/74 | LADSON Berkeley |
| OSPREY PANDION HALIAETUS | SC | 79-57-25 32-58-26 | 2.77 Miles ENE | G5 S4 | 11/01/79 | NORTH Berkeley |
| ROOKERY;LEAST TERN | ST | 80-02-18 32-56-10 | 2.70 Miles WSW | | 07/01/76 | LADSON Charleston |
| BLACK SWAMP SNAKE SEMINATRIX PYGAEA | UN | 80-02-13 32-58-32 | 2.34 Miles WNW | G5 S? | 03/01/56 | LADSON Berkeley |

GRANK/SRANK - Nature Conservancy rating:

- G1 - Critically imperiled globally because of extreme rarity or because of some factor(s) making it especially vulnerable to extinction.
- G2 - Imperiled globally because of rarity or factor(s) making it vulnerable.
- G3 - Either very rare throughout its range or found locally in a restricted range, or having factors making it vulnerable.
- G4 - Apparently secure globally, though it may be rare in parts of its range.
- G5 - Demonstrably secure globally, though it may be rare in parts of its range.
- S1 - Critically imperiled state-wide because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation.
- S2 - Imperiled state-wide because of rarity or factor(s) making it vulnerable.
- S3 - Rare or uncommon in state.
- S4 - Apparently secure in state.
- S5 - Demonstrably secure in state.

STATUS - Legal status:

- FE - Federal Endangered
- FT - Federal Threatened
- NC - Of Concern, National (plants)
- RC - Of Concern, Regional (plants)
- SE - State Endangered (animals)
- ST - State Threatened (animals)
- SC - Of Concern, State (animals)
- SL - Of Concern, State (plants)
- SX - State Extirpated
- CU - Candidate (Federal review)
- UN - Undetermined

S.C. DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL
BUREAU OF SOLID & HAZARDOUS WASTE
SITE BEING EVALUATED SEA GALLEY CLUB, 325735.0 LATITUDE 800005.0 LONGITUDE
THE GROUNDWATER SUPPLIES FOUND WITHIN 4 MILES
THIS REPORT IS BASED UPON DATA PROVIDED BY THE S.C. WATER RESOURCES COMMISSION (02/92).

| | | | |
|---|--------------------------|------------------|-----------------|
| COMPANY: Brk City Water/Sewer | COUNTY: | AQUIFER: | SCWRC: 18BB-m01 |
| CONTACT: PHONE: | LONGITUDE: 79-57-04 | COMP. DEPTH: 289 | USE: WS |
| ADDRESS: | LATITUDE: 32-57-47 | DRILL DEPTH: 296 | YIELD: 100 |
| | DISTANCE: 2.94 MILES ENE | ELEV: 12.00 | |
| REMARKS: Logs show cave-in @ 289'./ "?" elect. logs | LOCATION: BWSA Plant | | |

| | | | |
|--|--------------------------|------------------|-----------------|
| COMPANY: Town of Goose Creek | COUNTY: | AQUIFER: | SCWRC: 19AA-w02 |
| CONTACT: PHONE: | LONGITUDE: 80-02-56 | COMP. DEPTH: 323 | USE: UN |
| ADDRESS: | LATITUDE: 33-00-06 | DRILL DEPTH: -1 | YIELD: -1 |
| Goose Creek, SC | DISTANCE: 4.00 MILES NNW | ELEV: 40.00 | |
| REMARKS: Formerly a PS well pumped at 550 gpm. | LOCATION: Goose Creek | | |

| | | | |
|---|--------------------------|-----------------|-----------------|
| COMPANY: Town of Goose Creek | COUNTY: | AQUIFER: | SCWRC: 19BB-b01 |
| CONTACT: PHONE: | LONGITUDE: 80-01-22 | COMP. DEPTH: -1 | USE: UN |
| ADDRESS: | LATITUDE: 32-59-04 | DRILL DEPTH: -1 | YIELD: -1 |
| | DISTANCE: 2.11 MILES NNW | ELEV: 30.00 | |
| REMARKS: All construction data uncertain. Former WS well. | LOCATION: Goose Creek | | |

| | | | |
|---------------------------------------|--------------------------|-----------------|-----------------|
| COMPANY: Town of Goose Creek | COUNTY: | AQUIFER: | SCWRC: 19BB-b02 |
| CONTACT: PHONE: | LONGITUDE: 80-01-15 | COMP. DEPTH: -1 | USE: UN |
| ADDRESS: | LATITUDE: 32-59-13 | DRILL DEPTH: -1 | YIELD: -1 |
| | DISTANCE: 2.19 MILES NNW | ELEV: 25.00 | |
| REMARKS: Construction data uncertain. | LOCATION: Goose Creek | | |

| | | | |
|---|--------------------------|------------------|-----------------|
| COMPANY: Town of Goose Creek | COUNTY: | AQUIFER: | SCWRC: 19BB-c02 |
| CONTACT: PHONE: | LONGITUDE: 80-02-55 | COMP. DEPTH: 323 | USE: UN |
| ADDRESS: | LATITUDE: 32-59-36 | DRILL DEPTH: 323 | YIELD: -1 |
| | DISTANCE: 3.60 MILES WNW | ELEV: 42.00 | |
| REMARKS: Felkel and Southeastern Water Co. also listed under "OWNER". | LOCATION: Goose Creek | | |

S.C. DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL
BUREAU OF SOLID & HAZARDOUS WASTE
SITE BEING EVALUATED SEA GALLEY CLUB, 325735.0 LATITUDE 800005.0 LONGITUDE
THE GROUNDWATER SUPPLIES FOUND WITHIN 4 MILES
THIS REPORT IS BASED UPON DATA PROVIDED BY THE S.C. WATER RESOURCES COMMISSION (02/92).

| | | | |
|---|--------------------------|------------------|-----------------|
| COMPANY: Town of Goose Creek | COUNTY: | AQUIFER: | SCWRC: 19BB-c03 |
| CONTACT: PHONE: | LONGITUDE: 80-02-49 | COMP. DEPTH: 310 | USE: UN |
| ADDRESS: PO Box 236 | LATITUDE: 32-59-46 | DRILL DEPTH: 310 | YIELD: -1 |
| Goose Creek, SC | DISTANCE: 3.65 MILES WNW | ELEV: 40.00 | |
| REMARKS: Between Farm Rd and Janice St beyond Pineview Dr | LOCATION: Goose Creek | | |

| | | | |
|-------------------------------|--|------------------|-----------------|
| COMPANY: Westvaco Paper Mill | COUNTY: | AQUIFER: | SCWRC: 18CC-e01 |
| CONTACT: Athletic Club PHONE: | LONGITUDE: 79-59-15 | COMP. DEPTH: 361 | USE: RE |
| ADDRESS: Remount Rd | LATITUDE: 32-54-13 | DRILL DEPTH: 361 | YIELD: -1 |
| N Charleston, SC | DISTANCE: 3.95 MILES SSE | ELEV: 40.00 | |
| REMARKS: | LOCATION: N Rhett & Remount N Charleston | | |

| | | | |
|---|----------------------------|------------------|-----------------|
| COMPANY: James King | COUNTY: | AQUIFER: | SCWRC: 19BB-w01 |
| CONTACT: PHONE: 803-797-6958 | LONGITUDE: 80-02-32 | COMP. DEPTH: 300 | USE: DO |
| ADDRESS: 2446 Raymond Avenue | LATITUDE: 32-55-03 | DRILL DEPTH: -1 | YIELD: -1 |
| N Charleston, SC | DISTANCE: 3.76 MILES SSW | ELEV: 45.00 | |
| REMARKS: Poor E-log. Well filled after logging.20' drill rod in hole. | LOCATION: North Charleston | | |

| | | | |
|---|--------------------------|------------------|-----------------|
| COMPANY: Baptist College | COUNTY: | AQUIFER: | SCWRC: 19BB-f01 |
| CONTACT: PHONE: | LONGITUDE: 80-04-10 | COMP. DEPTH: 365 | USE: UN |
| ADDRESS: | LATITUDE: 32-58-52 | DRILL DEPTH: 365 | YIELD: -1 |
| Charleston, SC | DISTANCE: 4.23 MILES WNW | ELEV: 25.00 | |
| REMARKS: T.D.=360-370. Csg diameter 4"or6"? | LOCATION: | | |

| | | | |
|--|---------------------------------|------------------|-----------------|
| COMPANY: Southern Bell Teleph | COUNTY: | AQUIFER: | SCWRC: 19BB-m01 |
| CONTACT: PHONE: | LONGITUDE: 80-02-43 | COMP. DEPTH: 325 | USE: DO |
| ADDRESS: 8741 | LATITUDE: 32-57-57 | DRILL DEPTH: 325 | YIELD: 17 |
| N Charleston, SC 29405 | DISTANCE: 2.59 MILES WNW | ELEV: 28.00 | |
| REMARKS: Questionable P-test and water level data in file. | LOCATION: US Hwy 52 & Us Hwy 78 | | |

S.C. DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL
BUREAU OF SOLID & HAZARDOUS WASTE
SITE BEING EVALUATED SEA GALLEY CLUB, 325735.0 LATITUDE 800005.0 LONGITUDE
THE GROUNDWATER SUPPLIES FOUND WITHIN 4 MILES
THIS REPORT IS BASED UPON DATA PROVIDED BY THE S.C. WATER RESOURCES COMMISSION (02/92).

| | | | |
|--|-------------------------------|------------------|-----------------|
| COMPANY: Midland Park School | COUNTY: | AQUIFER: | SCWRC: 19BB-w02 |
| CONTACT: PHONE: | LONGITUDE: 80-02-28 | COMP. DEPTH: 359 | USE: UN |
| ADDRESS: Charleston Heights | LATITUDE: 32-55-12 | DRILL DEPTH: 359 | YIELD: 40 |
| Chas Heights, SC | DISTANCE: 3.59 MILES SSW | ELEV: 40.00 | |
| REMARKS: Appears capped 2' below LSD. Served school before city water. | LOCATION: Midland Park School | | |

| | | | |
|------------------------------|----------------------------|------------------|-----------------|
| COMPANY: Hughes Motor Lines | COUNTY: | AQUIFER: | SCWRC: 19BB-w03 |
| CONTACT: PHONE: 803-553-6410 | LONGITUDE: 80-02-00 | COMP. DEPTH: 365 | USE: IN |
| ADDRESS: 6819 Rivers Ave | LATITUDE: 32-55-10 | DRILL DEPTH: 365 | YIELD: 115 |
| N Charleston, SC | DISTANCE: 3.34 MILES SSW | ELEV: 40.00 | |
| REMARKS: | LOCATION: North Charleston | | |

| | | | |
|--|---|------------------|-----------------|
| COMPANY: Tom Youmans | COUNTY: | AQUIFER: | SCWRC: 19BB-w04 |
| CONTACT: PHONE: 803-553-1872 | LONGITUDE: 80-02-56 | COMP. DEPTH: 321 | USE: LS |
| ADDRESS: 2200 Dunlap St | LATITUDE: 32-55-25 | DRILL DEPTH: 321 | YIELD: 0 |
| Char. Heights, SC | DISTANCE: 3.72 MILES WSW | ELEV: 30.00 | |
| REMARKS: H2SO4 odor. Chlorides=82.5 (field kit). | LOCATION: Youmans Trailer Park, Char Hght | | |

| | | | |
|------------------------------|--------------------------|------------------|-----------------|
| COMPANY: Town of Goose Creek | COUNTY: | AQUIFER: | SCWRC: 19BB-c01 |
| CONTACT: PHONE: | LONGITUDE: 80-02-19 | COMP. DEPTH: 322 | USE: UN |
| ADDRESS: | LATITUDE: 32-59-38 | DRILL DEPTH: 322 | YIELD: 0 |
| , | DISTANCE: 3.20 MILES NNW | ELEV: 41.00 | |
| REMARKS: | LOCATION: Goose Creek | | |

Ref 2

South Carolina Department of Health and Environmental Control

2600 Bull Street
Columbia, S.C. 29201

Commissioner
Michael D. Jarrett



Board
Henry S. Jordan, M.D., Chairman
John B. Patc, M.D., Vice-Chairman
William E. Applegate, III, Secretary
Toney Graham, Jr., M.D.
John H. Burriss
Richard E. Jabbour, D.D.S.
Currie B. Spivey, Jr.

MEMORANDUM

RECEIVED
JAN 11 1990
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
COLUMBIA, SOUTH CAROLINA

TO: John Cresswell, Manager
Site Screening Section
Division of Site Engineering and Screening
Bureau of Solid and Hazardous Waste Management

FROM: Judy Canova, Hydrologist
Superfund and Solid Waste Section
Division of Hydrogeology
Bureau of Solid and Hazardous Waste Management

DATE: January 10, 1990

RE: SAE Galley Club/Galley Hall Site
SCD 987 566 452
Berkeley County
Preliminary Assessment - Hydrogeologic Review

A hydrogeologic review of the referenced site has been conducted to assist in completing a preliminary assessment for the Superfund program. The purpose of the hydrogeologic review is to provide information regarding the groundwater migration route of potential contaminants. It includes information obtained from South Carolina Water Resources Commission well tabulations, available site specific information from state files, a target survey using United States Geological Survey topographic quadrangles, and a literature review.

According to Park (1985), the following geologic units underlie the site:

| <u>Name</u> | <u>Description</u> | <u>Potential Yield</u> | <u>Depth of Occurrence</u> |
|--|--|----------------------------|--------------------------------|
| Shallow Undifferentiated Sediments | Heterogeneous mixture of sand, silt, clay, and shells | Unknown | 0' to 25' |
| Cooper Formation | Sandy phosphatic olive-green to brown dense limestone | N/A | 25' to 225' |

| | | | |
|------------------|---|---------|--------------|
| Santee Limestone | Light colored fossiliferous limestone | 350 gpm | 225' to 375' |
| Black Mingo | Interbedded argillaceous sand, limestone, and clay | 350 gpm | 375' to 800' |

The potential aquifer of concern includes the Santee/Black Mingo. The Cooper is a regionally recognized laterally extensive deposit of low hydraulic conductivity that likely restricts the vertical migration of groundwater (Park, 1985), although many wells in the Santee (Black Mingo) are of open hole construction which could provide a conduit for contaminant migration to the potential aquifer of concern. The depth to bedrock is estimated to be twenty-two hundred feet. The hydraulic conductivity of fractured bedrock in the area may be as high as 10^{-5} cm/s. The site is in an area with a potential for karst topography.

A well inventory within a radius of four miles of the site reveals the following uses of groundwater from the aquifer of concern: community and domestic water supply (Table 1). There are no alternate, readily available, unthreatened sources of groundwater in the four mile site radius.

The unsaturated zone is likely to consist dominantly of sand and clay. Sediments of this composition have an approximate saturated hydraulic conductivity of 10^{-4} to 10^{-5} cm/sec. Based on topographic relief and surface drainage, the depth to groundwater is estimated to be between five and twenty feet. The predominant groundwater flow direction appears to be towards the south and west in the shallow sediments. Groundwater flow direction in the Black Mingo/Santee is to the southwest (Aucott and Speiran, 1985).

cc: Christine Sanford

Table 1 p. 1 of 2

Galley Club / Galley Hall site

SELECTED COORDINATES: 32406/795513, 325406/795513, 325406/800513, 324206/800513

SELECTED RECORDS: ALL RECORDS WITHIN SELECTED COORDINATES

LOGS: D driller's L lithologic SP spontaneous potential G gamma LT 6 ft lateral C caliper O other
R resistance T temperature LM long normal (64 in res) N nuclear FR fluid resist SN short normal

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12/19/89

SURFACE / SUBSURFACE HYDROGEOLOGIC INFORMATION SYSTEM
ABBREVIATED SOURCE INFORMATION
FOR
SOURCES LOCATED WITHIN SELECTED COORDINATES

| USGS ID | LOCAL ID #2 | LOCAL ID #1 | OWNER ADDRESS TELEPHONE | WELL TYPE / USE | LAT / LONG | ELEV TOTAL FT DEPTH MSL FT BLS | CASING DIAMETERS AND DEPTHS | INTAKE TOP / BOTTOM | WELL STATIC YIELD / | WELL AT COMPLETE CONSTR FT BLS | LOGS | CORES OR CUTTINGS | USGS QUAD NAME | COMMENTS |
|------------|----------------|----------------|-------------------------------|--------------------------|------------------|--------------------------------------|--------------------------------------|------------------------------|---------------------------|---|------|-------------------------|----------------|--|
| CHN-0294 | 1600-E1 | Z 3544 | WESTVACO | WS | 325413 795913 | 40 361 | 6 198 0 0 0 0 | 0 0 | 0 0.00 | 07/04/67 D | | | | CAN'T LOCATE DC:ACKERMAN |
| CHN-0169 | 1500-D1 | Z 3419 | CHARLESTON AIRFORCE BASE | | 325424 800350 | 45 0 | 0 0 0 0 0 0 | 0 0 | 0 0.00 | / / SN LN SP B I | | | | THREE COUNTY NUMBERS ASSIGNED TO SAME WELL SEE CHN 172 456 #333 IS 2260-125, TOWN OF EDISTO BEACH GEOTHERMAL TEST HOLE E V POOR |
| CHN-0525 | 1000-D1 | CHN-0456 | VPI&SU | AB | 325424 800350 | 45 1092 | 2 1002 0 0 0 0 | 0 0 | 0 0.00 | 07/04/81 T 6 SN | | | | |
| CHN-0213 | 1988-W1 | Z 3463 | JAMES KING | DO | 325503 800232 | 45 300 | 4 0 0 0 0 0 | 0 0 | 0 0.00 | / / SN | | | | |
| CHN-0297 | 1986-W3 | Z 3547 | HUGHES MOTER LINES | 1N | 325510 800200 | 40 365 | 4 86 0 0 0 0 | 0 115 | 0 0.00 | 07/04/78 D | | | | DC:ACKERMAN 0/5=2.7 HACH ANAL. 3/79 DC:ACKERMAN 0/5=4 |
| CHN-0296 | 1568-W2 | Z 3546 | MIDLAND PARK ELEM. | UN | 325512 800228 | 40 359 | 6 82 0 0 0 0 | 0 40 | 0 0.00 | 07/03/52 D | | | | |
| CHN-0298 | 1988-W4 | Z 3548 | TOM YOUNG | DO | 325525 800256 | 30 321 | 0 0 0 0 0 0 | 0 0 | 0 0.00 | 07/04/55 | | | | HACH A,CL, |
| BRK-0274 | 1882-M1 | Z 2697 | BERKELEY CTY. WATER | WS | 325747 795704 | 12 296 | 6 218 0 0 0 0 | 0 100 | 0 0.00 | 07/04/81 D 6 SN C | | | | GEO. SAMPLES |
| CHN-0096 | 1968-M1 | Z 3346 | SOUTHERN BELL | DO | 325757 800243 | 28 325 | 6 270 0 0 0 0 | 0 17 | 0 0.00 | 07/04/63 | | | | USGS SCH. 62 |
| CHN-0129 | 1955-F1 | Z 3379 | BAPTIST COLLEGE | AB | 325832 800410 | 25 350 | 6 0 0 0 0 0 | 0 0 | 0 0.00 | 07/04/67 | | | | USGS SCH. 66 |
| BRK-0270 | 1968-B1 | Z 2459 | TOWN OF GOOSE CREEK | WS | 325904 800122 | 30 0 | 6 50 0 0 0 0 | 0 0 | 0 0.00 | / / | | | | UN |
| BRK-0212 | 1960-22 | Z 2635 | TOWN OF GOOSE CREEK | WS | 325913 800113 | 25 0 | 0 0 0 0 0 0 | 0 0 | 0 0.00 | / / | | | | AB |
| BRK-0214 | 1968-02 | Z 2637 | TOWN OF GOOSE CREEK | WS | 325936 800255 | 42 323 | 6 95 0 0 0 0 | 0 220 | 0 0.00 | 07/03/64 | | | | AB |

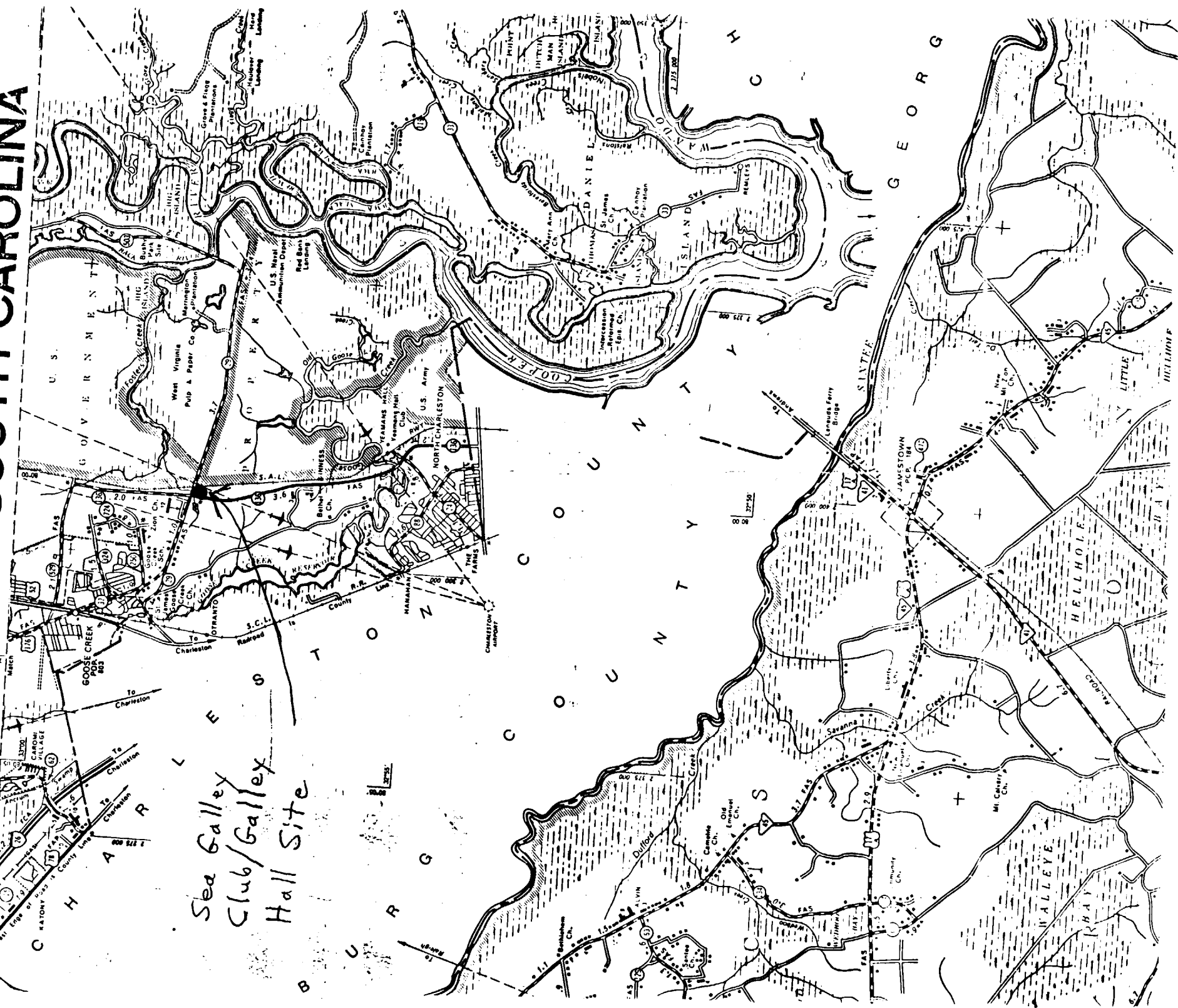
Table 1 p-2062.

Page No. 2
12/19/89SURFACE / SUBSURFACE HYDROGEOLOGIC INFORMATION SYSTEM
ABBREVIATED SOURCE INFORMATION
FOR
SOURCES LOCATED WITHIN SELECTED COORDINATES

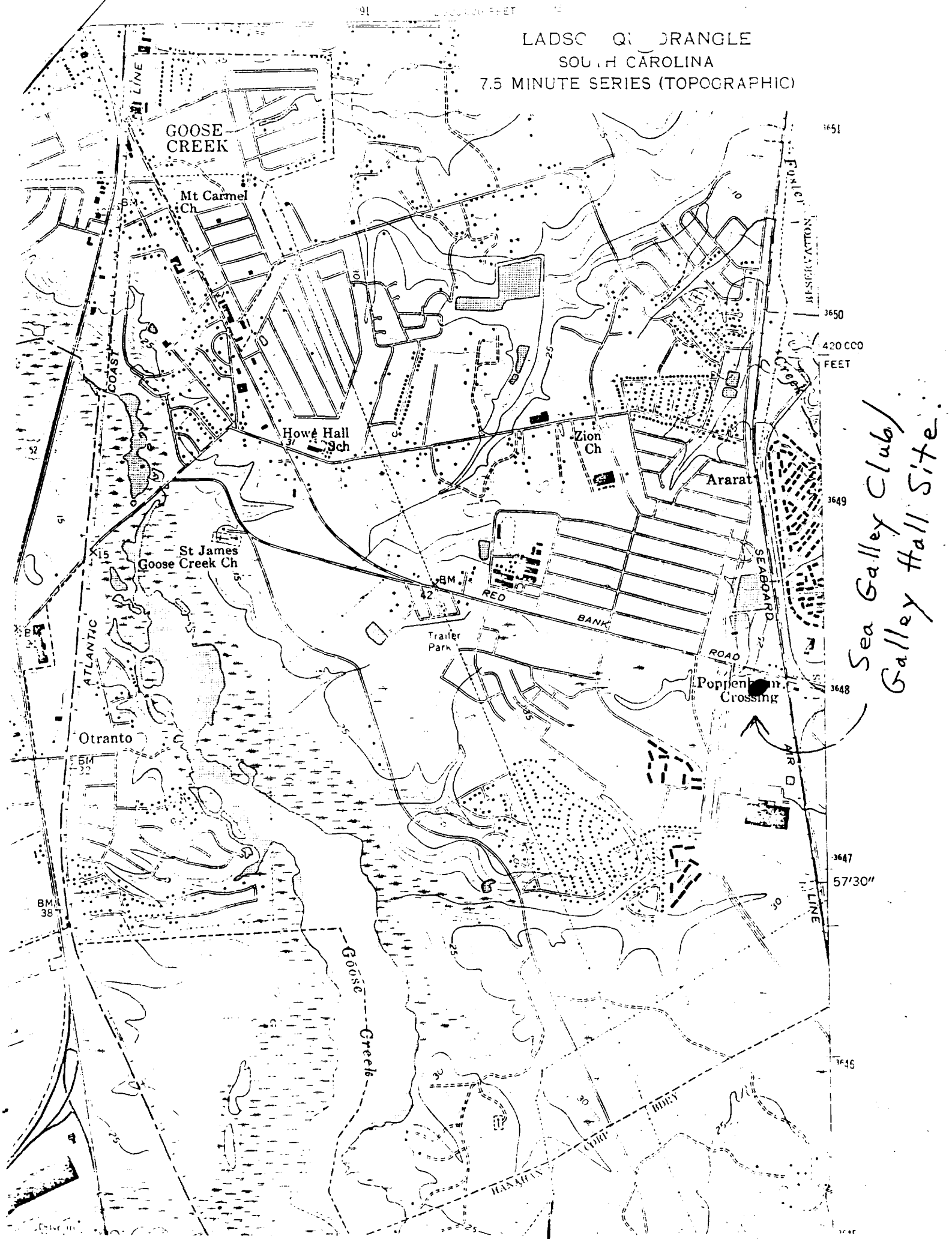
| SSS ID | LOCAL ID #2 | LOCAL ID #1 | OWNER ADDRESS TELEPHONE | WELL TYPE / USE | LAT / LONG | ELEV TOTAL FT DEPTH MSL FT BLS | CASING DIAMETERS AND DEPTHS | INTAKE TOP / BOTTOM | WELL STATIC YIELD AT COMPLETE CONSTR FT BLS | LOGS | CORES OR CUTTINGS | USGS QUAD NAME | COMMENTS |
|-----------|----------------|----------------|-------------------------------|--------------------------|------------------|--------------------------------------|--------------------------------------|------------------------------|---|------|-------------------------|----------------|-------------------|
| BK-0213 | 1958-C1 | Z 2636 | TOWN OF GOOSE CREEK | WS | 325938 | 40 322 | 10 0 0 | 326 0.00 07/04/65 D | | | | | DC:ACKERMAN AB |
| BK-0215 | 1958-C3 | Z 2638 | TOWN OF GOOSE CREEK | WS | 325946 | 40 310 | 8 87 0 | 0 0.00 07/04/65 D | | | | | DC:ACKERMAN AB |

BERKELEY COUNTY SOUTH CAROLINA

Sea Galley
Club/Galley
Hall Site



LADSC QUADRANGLE
SOUTH CAROLINA
7.5 MINUTE SERIES (TOPOGRAPHIC)



Sea Galley Club /
Galley Hall Site.

References Cited:

Aucott, W. R., and Sperian, G. K., 1985 Potentiometric Surfaces of November 1982 and Declines in the Potentiometric Surfaces Between the Period Prior to Development and November 1982 for the Coastal Plain Aquifers of South Carolina: U.S. Geological Survey Water Resources Investigations Report 84-4215.

Park, A. D., 1985, The Ground Water Resources of Charleston, Berkeley, and Dorchester Counties, South Carolina: S.C. Water Resources Commission Report # 139, 146 p.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM*****

DATE: 12/08/94

SUBJECT: Results of Metals Analysis;
95-0050 SEA GALLEY CLUB
GOOSE CREE SC
CASE NO: 22812

FROM: Charles H. Hooper *CH Hooper*
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOHN CRISWELL

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

INORGANIC DATA QUALIFIERS REPORT

Case Number: 22812
 Project Number: 95-0050
 Site: Sea Galley Club, Goose Creek, SC

| Element | Flag | Samples Affected | Reason |
|--------------------------|------|---|---|
| all samples | | | |
| As, Se, Zn | U | All positives >IDL but <CRDL | baseline instability |
| Al, Ca, Fe, Mn, Na, K, V | U | all positives >IDL but <10X blank contamination | postivities in blanks |
| Pb | J | All results with Fe or Al concentration in solution >86000ug/L | Suspected negative interference as noted in the contractor ICS |
| Tl | JN | All positives with Al or Fe concentrations in solution >88000ug/L | Suspected positive interference as noted in the contractor ICS |
| Ni | J | MDHQ59,60,63 | %RSD >20% for ICP multiple exposure |
| Co | J | MDHQ63,64 | %RSD >20% for ICP multiple exposure |
| Cd | U | MDHQ62 | %RSD >20% for ICP multiple exposure and result >IDL but <CRDL |
| Be | J | MDHQ59,60,61,62,63,64 | %RSD <20% for ICP multiple exposure and result >IDL but <CRDL |
| Cd | J | MDHQ61 | result >IDL but <CRDL and %RSD <20% for ICP multiple exposure |
| Be | J | MDHQ59,60,61,62,63,64 | Only 2X CRDL standard analysis required by SOW for ICP analysis |
| Cd | J | MDHQ61 | only 2X CRDL standard analysis required by SOW for ICP analysis |
| Sb | J | all soils | matrix spike recovery 41.4% |
| Al | J | all soils | matrix duplicate RPD 38.6% |
| Mn | J | all soils | matrix duplicate RPD 76.9% |
| Pb | J | all negative soils | recovery of CRA standard only 5% |

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

METALS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91352 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 001-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: MD NUMBER: HQ59 **

| MG/KG | ANALYTICAL RESULTS | MG/KG | ANALYTICAL RESULTS |
|-------|--------------------|--------|--------------------|
| 6300J | ALUMINUM | 7.3J | MANGANESE |
| 3.6UJ | ANTIMONY | 0.15UJ | MERCURY |
| 2.0U | ARSENIC | 2.2J | NICKEL |
| 19 | BARIUM | 180U | POTASSIUM |
| 0.06J | BERYLLIUM | 0.8U | SELENIUM |
| 0.44U | CADMIUM | 0.58U | SILVER |
| 660 | CALCIUM | 39 | SODIUM |
| 5.7 | CHROMIUM | 1.2U | THALLIUM |
| 0.86 | COBALT | NA | TIN |
| 1.9 | COPPER | 13 | VANADIUM |
| 100 | IRON | 6.1 | ZINC |
| | LEAD | 32 | PERCENT MOISTURE |
| 150 | MAGNESIUM | | |

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

METALS DATA REPORT

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***
** PROJECT NO. 95-0050  SAMPLE NO. 91353  SAMPLE TYPE: SOIL  PROG ELEM: NSF  COLLECTED BY: F.M. CARNS  **
** SOURCE: SEA GALLEY CLUB  CITY: GOOSE CREE  ST: SC  **
** STATION ID: 002-SS  COLLECTION START: 10/27/94  1115  STOP: 00/00/00  **
** CASE NUMBER: 22812  SAS NUMBER:  MD NUMBER: HQ60  **
**

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| MG/KG | ANALYTICAL RESULTS | MG/KG | ANALYTICAL RESULTS |
|-------|--------------------|--------|--------------------|
| 4800J | ALUMINUM | 16J | MANGANESE |
| 2.7UJ | ANTIMONY | 0.11UJ | MERCURY |
| 2.0U | ARSENIC | 1.9J | NICKEL |
| 13 | BARIUM | 90U | POTASSIUM |
| 0.05J | BERYLLIUM | 0.60U | SELENIUM |
| 0.33U | CADMIUM | 0.44U | SILVER |
| 610 | CALCIUM | 47 | SODIUM |
| 4.6 | CHROMIUM | 0.90U | THALLIUM |
| 0.42U | COBALT | NA | TIN |
| 1.8 | COPPER | 6.9 | VANADIUM |
| 3000 | IRON | 4.5 | ZINC |
| 15 | LEAD | 12 | PERCENT MOISTURE |
| 130 | MAGNESIUM | | |

FOOTNOTES

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 *K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
 *U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
 *R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

METALS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91354 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 003-SS COLLECTION START: 10/27/94 1126 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: MD NUMBER: HQ61 **

| MG/KG | ANALYTICAL RESULTS | MG/KG | ANALYTICAL RESULTS |
|--------|--------------------|--------|--------------------|
| 1100J | ALUMINUM | 240J | MANGANESE |
| 2.9UJ | ANTIMONY | 0.12UJ | MERCURY |
| 2.0U | ARSENIC | 7.5 | NICKEL |
| 8.3 | BARIUM | 600U | POTASSIUM |
| 0.15J | BERYLLIUM | 0.7U | SELENIUM |
| 0.62J | CADMIUM | 0.47U | SILVER |
| 360000 | CALCIUM | 180 | SODIUM |
| 5.4 | CHROMIUM | 1.0U | THALLIUM |
| 2.2 | COBALT | NA | TIN |
| 3.5 | COPPER | 6.8 | VANADIUM |
| 7500 | IRON | 56 | ZINC |
| 9 | LEAD | 17 | PERCENT MOISTURE |
| .500 | MAGNESIUM | | |

FOOTNOTES

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*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

METALS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91355 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 004-SS COLLECTION START: 10/27/94 1138 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: MD NUMBER: HQ62 **
**

| MG/KG | ANALYTICAL RESULTS | MG/KG | ANALYTICAL RESULTS |
|--------|--------------------|--------|--------------------|
| 3100J | ALUMINUM | 260J | MANGANESE |
| 3.5UJ | ANTIMONY | 0.15UJ | MERCURY |
| 3.2 | ARSENIC | 17 | NICKEL |
| 65 | BARIUM | 480U | POTASSIUM |
| 0.20J | BERYLLIUM | 0.80U | SELENIUM |
| 2.0U | CADMIUM | 0.58U | SILVER |
| 290000 | CALCIUM | 310 | SODIUM |
| 16 | CHROMIUM | 1.2U | THALLIUM |
| 3.5 | COBALT | NA | TIN |
| 14 | COPPER | 30 | VANADIUM |
| 400 | IRON | 290 | ZINC |
| 1 | LEAD | 31 | PERCENT MOISTURE |
| .000 | MAGNESIUM | | |

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

METALS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91356 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 005-SD COLLECTION START: 10/27/94 1153 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: MD NUMBER: HQ63 **
**

MG/KG ANALYTICAL RESULTS
2800J ALUMINUM
3.30J ANTIMONY
3.0U ARSENIC
8.2 BARIUM
0.08J BERYLLIUM
0.41U CADMIUM
13000 CALCIUM
4.3 CHROMIUM
0.58J COBALT
3.5 COPPER
1600 IRON
6 LEAD
0 MAGNESIUM

MG/KG ANALYTICAL RESULTS
20J MANGANESE
0.140J MERCURY
1.6J NICKEL
120U POTASSIUM
0.8U SELENIUM
0.54U SILVER
46 SODIUM
1.1U THALLIUM
NA TIN
5.9 VANADIUM
17 ZINC
28 PERCENT MOISTURE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

METALS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91357 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 008-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: MD NUMBER: HQ64 **

| MG/KG | ANALYTICAL RESULTS | MG/KG | ANALYTICAL RESULTS |
|-------|--------------------|--------|--------------------|
| 9600J | ALUMINUM | 15J | MANGANESE |
| 3.9UJ | ANTIMONY | 0.17UJ | MERCURY |
| 3.0U | ARSENIC | 3.5 | NICKEL |
| 22 | BARIUM | 310U | POTASSIUM |
| 0.12J | BERYLLIUM | 0.9U | SELENIUM |
| 0.48U | CADMIUM | 0.64U | SILVER |
| 710 | CALCIUM | 50 | SODIUM |
| 8.0 | CHROMIUM | 1.3U | THALLIUM |
| 0.92J | COBALT | NA | TIN |
| 2.4 | COPPER | 17 | VANADIUM |
| 700 | IRON | 7.9 | ZINC |
| | LEAD | 39 | PERCENT MOISTURE |
| 50 | MAGNESIUM | | |

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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TOTO2\$DISK:[ESAT]PRODCPCB.LST;1

TOTO2\$DISK:[ESAT]PRODCVOA.LST;1

INORGANIC DATA QUALIFIERS REPORT

Case Number: 22812
 Project Number: 95-0050
 Site: Sea Galley Club, Goose Creek, SC

| Element | Flag | Samples Affected | Reason |
|--------------------------|------|---|---|
| all samples | | | |
| As, Se, Zn | U | All positives >IDL but <CRDL | baseline instability |
| Al, Ca, Fe, Mn, Na, K, V | U | all positives >IDL but <10X blank contamination | postivies in blanks |
| Pb | J | All results with Fe or Al concentration in solution >86000ug/L | Suspected negative interference as noted in the contractor ICS |
| Tl | JN | All positives with Al or Fe concentrations in solution >88000ug/L | Suspected positive interference as noted in the contractor ICS |
| Ni | J | MDHQ59, 60, 63 | %RSD >20% for ICP multiple exposure |
| Co | J | MDHQ63, 64 | %RSD >20% for ICP multiple exposure |
| Cd | U | MDHQ62 | %RSD >20% for ICP multiple exposure and result >IDL but <CRDL |
| Be | J | MDHQ59, 60, 61, 62, 63, 64 | %RSD <20% for ICP multiple exposure and result >IDL but <CRDL |
| Cd | J | MDHQ61 | result >IDL but <CRDL and %RSD <20% for ICP multiple exposure |
| Be | J | MDHQ59, 60, 61, 62, 63, 64 | Only 2X CRDL standard analysis required by SOW for ICP analysis |
| Cd | J | MDHQ61 | only 2X CRDL standard analysis required by SOW for ICP analysis |
| Sb | J | all soils | matrix spike recovery 41.4% |
| Al | J | all soils | matrix duplicate RPD 38.6% |
| Mn | J | all soils | matrix duplicate RPD 76.9% |
| Pb | J | all negative soils | recovery of CRA standard only 5% |

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91352 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 001-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE NO.: 22812 SAS NO.: D. NO.: HQ59 MD NO: HQ59 **
**

RESULTS UNITS PARAMETER
3.7U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91353 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 002-SS COLLECTION START: 10/27/94 1115 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ60 MD NO: HQ60 **
**

RESULTS UNITS PARAMETER
2.8U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91354 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 003-SS COLLECTION START: 10/27/94 1126 STOP: 00/00/00 **
** CASE NO.: 22812 SAS NO.: D. NO.: HQ61 MD NO: HQ61 **
**

RESULTS UNITS PARAMETER
3.00 MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91355 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 004-SS COLLECTION START: 10/27/94 1138 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ62 MD NO: HQ62 **
**

RESULTS UNITS PARAMETER
3.6U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91356 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 005-SD COLLECTION START: 10/27/94 1153 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ63 MD NO: HQ63 **
**

RESULTS UNITS PARAMETER
3.5U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91357 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 008-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ64 MD NO: HQ64 **
**

RESULTS UNITS PARAMETER
4.1U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

TOTO2\$DISK:[ESAT]PRODTCLP.LST;1

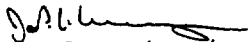
TOTO2\$DISK:[ESAT]PRODVOAMISC.LST;1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM*****

DATE: 12/13/94

SUBJECT: Results of Pesticide/PCB Analysis;
95-0050 SEA GALLEY CLUB
GOOSE CREE SC
CASE NO: 22812

FROM: Charles H. Hooper 
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOHN CRISWELL

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

ORGANIC DATA QUALIFIER REPORT

Case Number 22812 Project Number 95-0050 SAS Number
Site ID. Sea Galley Club, Goose Cree, SC

| <u>Affected Samples</u> | <u>Compound or Fraction</u> | <u>Flag Used</u> | <u>Reason</u> |
|-------------------------|-----------------------------|----------------------|---|
| <u>Volatiles</u> | | | |
| 91352 | toluene | J | < quantitation limit |
| 91353,91354 | acetone | J N | erratic response factor common lab contaminant |
| 91355 | xylene | J | < quantitation limit |
| <u>Extractables</u> | | | |
| all samples | 2,4,6-trichlorophenol | J | low blind spike recovery |
| | fluorene | J | low blind spike recovery |
| 91355 | phenanthrene | J | < quantitation limit |
| | fluoranthene | J | < quantitation limit |
| | pyrene | J | < quantitation limit |
| | chrysene | J | < quantitation limit |
| | benzo(b/k)fluoranthene | J | < quantitation limit |
| | benzo(a)pyrene | J | < quantitation limit |
| | indeno(1,2,3-cd)pyrene | J | < quantitation limit |
| | benzo(g,h,i)perylene | J | < quantitation limit |
| <u>Pesticides</u> | | | |
| all samples | endrin aldehyde | R | unacceptable blind spike recovery |

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PESTICIDES/PCB'S DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91352 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 001-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: D. NUMBER: HQ59 **

UG/KG ANALYTICAL RESULTS

2.4U ALPHA-BHC
2.4U BETA-BHC
2.4U DELTA-BHC
2.4U GAMMA-BHC (LINDANE)
2.4U HEPTACHLOR
2.4U ALDRIN
2.4U HEPTACHLOR EPOXIDE
2.4U ENDOSULFAN I (ALPHA)
4.8U DIELDRIN
4.8U 4,4'-DDE (P,P'-DDE)
4.8U ENDRIN
4.8U ENDOSULFAN II (BETA)
4.8U 4,4'-DDD (P,P'-DDD)
4.8U ENDOSULFAN SULFATE
4.8U 4,4'-DDT (P,P'-DDT)

UG/KG ANALYTICAL RESULTS

24U METHOXYCHLOR
4.8U ENDRIN KETONE
4.8UR ENDRIN ALDEHYDE
-- CHLORDANE (TECH. MIXTURE) /1
2.4U GAMMA-CHLORDANE /2
2.4U ALPHA-CHLORDANE /2
240U TOXAPHENE
48U PCB-1016 (AROCOR 1016)
96U PCB-1221 (AROCOR 1221)
48U PCB-1232 (AROCOR 1232)
48U PCB-1242 (AROCOR 1242)
48U PCB-1248 (AROCOR 1248)
48U PCB-1254 (AROCOR 1254)
48U PCB-1260 (AROCOR 1260)
31 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PESTICIDES/PCB'S DATA REPORT

*** **
** PROJECT NO. 95-0050 SAMPLE NO. 91353 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 002-SS COLLECTION START: 10/27/94 1115 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: D. NUMBER: HQ60 **
*** **

UG/KG ANALYTICAL RESULTS

1.8U ALPHA-BHC
1.8U BETA-BHC
1.8U DELTA-BHC
1.8U GAMMA-BHC (LINDANE)
1.8U HEPTACHLOR
1.8U ALDRIN
1.8U HEPTACHLOR EPOXIDE
1.8U ENDOSULFAN I (ALPHA)
3.6U DIELDRIN
3.6U 4,4'-DDE (P,P'-DDE)
3.6U ENDRIN
3.6U ENDOSULFAN II (BETA)
3.6U 4,4'-DDD (P,P'-DDD)
3.6U ENDOSULFAN SULFATE
3.6U 4,4'-DDT (P,P'-DDT)

UG/KG

ANALYTICAL RESULTS

18U METHOXYCHLOR
3.6U ENDRIN KETONE
3.6UR ENDRIN ALDEHYDE
-- CHLORDANE (TECH. MIXTURE) /1
1.8U GAMMA-CHLORDANE /2
1.8U ALPHA-CHLORDANE /2
180U TOXAPHENE
36U PCB-1016 (AROCOR 1016)
72U PCB-1221 (AROCOR 1221)
36U PCB-1232 (AROCOR 1232)
36U PCB-1242 (AROCOR 1242)
36U PCB-1248 (AROCOR 1248)
36U PCB-1254 (AROCOR 1254)
36U PCB-1260 (AROCOR 1260)
11 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PESTICIDES/PCB'S DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91354 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 003-SS COLLECTION START: 10/27/94 1126 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: D. NUMBER: HQ61 **

| UG/KG | ANALYTICAL RESULTS | UG/KG | ANALYTICAL RESULTS |
|-------|----------------------|-------|------------------------------|
| 1.9U | ALPHA-BHC | 19U | METHOXYCHLOR |
| 1.9U | BETA-BHC | 3.9U | ENDRIN KETONE |
| 1.9U | DELTA-BHC | 3.9UR | ENDRIN ALDEHYDE |
| 1.9U | GAMMA-BHC (LINDANE) | -- | CHLORDANE (TECH. MIXTURE) /1 |
| 1.9U | HEPTACHLOR | 1.9U | GAMMA-CHLORDANE /2 |
| 1.9U | ALDRIN | 1.9U | ALPHA-CHLORDANE /2 |
| 1.9U | HEPTACHLOR EPOXIDE | 190U | TOXAPHENE |
| 1.9U | ENDOSULFAN I (ALPHA) | 39U | PCB-1016 (AROCLOR 1016) |
| 3.9U | DIELDRIN | 78U | PCB-1221 (AROCLOR 1221) |
| 3.9U | 4,4'-DDE (P,P'-DDE) | 39U | PCB-1232 (AROCLOR 1232) |
| 3.9U | ENDRIN | 39U | PCB-1242 (AROCLOR 1242) |
| 3.9U | ENDOSULFAN II (BETA) | 39U | PCB-1248 (AROCLOR 1248) |
| 3.9U | 4,4'-DDD (P,P'-DDD) | 39U | PCB-1254 (AROCLOR 1254) |
| 3.9U | ENDOSULFAN SULFATE | 39U | PCB-1260 (AROCLOR 1260) |
| 3.9U | 4,4'-DDT (P,P'-DDT) | 16 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PESTICIDES/PCB'S DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91355 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 004-SS COLLECTION START: 10/27/94 1138 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: D. NUMBER: HQ62 **
**

| UG/KG | ANALYTICAL RESULTS | UG/KG | ANALYTICAL RESULTS |
|-------|----------------------|-------|------------------------------|
| 2.4U | ALPHA-BHC | 24U | METHOXYCHLOR |
| 2.4U | BETA-BHC | 4.8U | ENDRIN KETONE |
| 2.4U | DELTA-BHC | 4.8UR | ENDRIN ALDEHYDE |
| 2.4U | GAMMA-BHC (LINDANE) | -- | CHLORDANE (TECH. MIXTURE) /1 |
| 2.4U | HEPTACHLOR | 2.4U | GAMMA-CHLORDANE /2 |
| 2.4U | ALDRIN | 2.4U | ALPHA-CHLORDANE /2 |
| 2.4U | HEPTACHLOR EPOXIDE | 240U | TOXAPHENE |
| 2.4U | ENDOSULFAN I (ALPHA) | 48U | PCB-1016 (AROCOR 1016) |
| 4.8U | DIELDRIN | 96U | PCB-1221 (AROCOR 1221) |
| 4.8U | 4,4'-DDE (P,P'-DDE) | 48U | PCB-1232 (AROCOR 1232) |
| 4.8U | ENDRIN | 48U | PCB-1242 (AROCOR 1242) |
| 6.0U | ENDOSULFAN II (BETA) | 48U | PCB-1248 (AROCOR 1248) |
| 4.8U | 4,4'-DDD (P,P'-DDD) | 48U | PCB-1254 (AROCOR 1254) |
| 4.8U | ENDOSULFAN SULFATE | 48U | PCB-1260 (AROCOR 1260) |
| 4.8U | 4,4'-DDT (P,P'-DDT) | 32 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

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*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PESTICIDES/PCB'S DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91356 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 005-SD COLLECTION START: 10/27/94 1153 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: D. NUMBER: HQ63 **

| UG/KG | ANALYTICAL RESULTS | UG/KG | ANALYTICAL RESULTS |
|-------|----------------------|-------|------------------------------|
| 2.6U | ALPHA-BHC | 26U | METHOXYCHLOR |
| 2.6U | BETA-BHC | 5.2U | ENDRIN KETONE |
| 2.6U | DELTA-BHC | 5.2UR | ENDRIN ALDEHYDE |
| 2.6U | GAMMA-BHC (LINDANE) | -- | CHLORDANE (TECH. MIXTURE) /1 |
| 2.6U | HEPTACHLOR | 2.6U | GAMMA-CHLORDANE /2 |
| 2.6U | ALDRIN | 2.6U | ALPHA-CHLORDANE /2 |
| 2.6U | HEPTACHLOR EPOXIDE | 260U | TOXAPHENE |
| 2.6U | ENDOSULFAN I (ALPHA) | 52U | PCB-1016 (AROCLOR 1016) |
| 5.2U | DIELDRIN | 100U | PCB-1221 (AROCLOR 1221) |
| 5.2U | 4,4'-DDE (P,P'-DDE) | 52U | PCB-1232 (AROCLOR 1232) |
| 5.2U | ENDRIN | 52U | PCB-1242 (AROCLOR 1242) |
| 5.2U | ENDOSULFAN II (BETA) | 52U | PCB-1248 (AROCLOR 1248) |
| 5.2U | 4,4'-DDD (P,P'-DDD) | 52U | PCB-1254 (AROCLOR 1254) |
| 5.2U | ENDOSULFAN SULFATE | 52U | PCB-1260 (AROCLOR 1260) |
| 5.2U | 4,4'-DDT (P,P'-DDT) | 36 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PESTICIDES/PCB'S DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91357 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 008-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: D. NUMBER: HQ64 **

UG/KG ANALYTICAL RESULTS

2.3U ALPHA-BHC
2.3U BETA-BHC
2.3U DELTA-BHC
2.3U GAMMA-BHC (LINDANE)
2.3U HEPTACHLOR
2.3U ALDRIN
2.3U HEPTACHLOR EPOXIDE
2.3U ENDOSULFAN I (ALPHA)
4.6U DIELDRIN
4.6U 4,4'-DDE (P,P'-DDE)
4.6U ENDRIN
4.6U ENDOSULFAN II (BETA)
4.6U 4,4'-DDD (P,P'-DDD)
4.6U ENDOSULFAN SULFATE
4.6U 4,4'-DDT (P,P'-DDT)

UG/KG ANALYTICAL RESULTS

23U METHOXYCHLOR
4.6U ENDRIN KETONE
4.6UR ENDRIN ALDEHYDE
-- CHLORDANE (TECH. MIXTURE) /1
2.3U GAMMA-CHLORDANE /2
2.3U ALPHA-CHLORDANE /2
230U TOXAPHENE
46U PCB-1016 (AROCOR 1016)
92U PCB-1221 (AROCOR 1221)
46U PCB-1232 (AROCOR 1232)
46U PCB-1242 (AROCOR 1242)
46U PCB-1248 (AROCOR 1248)
46U PCB-1254 (AROCOR 1254)
46U PCB-1260 (AROCOR 1260)
29 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

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TOTOT\$DISK:[ESAT]PRODCVOA.LST;1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM*****

DATE: 12/13/94

SUBJECT: Results of Extractable Organic Analysis;
95-0050 SEA GALLEY CLUB
GOOSE CREE SC
CASE NO: 22812

FROM: Charles H. Hooper 
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOHN CRISWELL

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

ORGANIC DATA QUALIFIER REPORT

Case Number 22812 Project Number 95-0050 SAS Number
Site ID. Sea Galley Club, Goose Cree, SC

| <u>Affected Samples</u> | <u>Compound or Fraction</u> | <u>Flag Used</u> | <u>Reason</u> |
|-------------------------|-----------------------------|----------------------|---|
| <u>Volatiles</u> | | | |
| 91352 | toluene | J | < quantitation limit |
| 91353,91354 | acetone | J N | erratic response factor common lab contaminant |
| 91355 | xylene | J | < quantitation limit |
| <u>Extractables</u> | | | |
| all samples | 2,4,6-trichlorophenol | J | low blind spike recovery |
| | fluorene | J | low blind spike recovery |
| 91355 | phenanthrene | J | < quantitation limit |
| | fluoranthene | J | < quantitation limit |
| | pyrene | J | < quantitation limit |
| | chrysene | J | < quantitation limit |
| | benzo(b/k)fluoranthene | J | < quantitation limit |
| | benzo(a)pyrene | J | < quantitation limit |
| | indeno(1,2,3-cd)pyrene | J | < quantitation limit |
| | benzo(g,h,i)perylene | J | < quantitation limit |
| <u>Pesticides</u> | | | |
| all samples | endrin aldehyde | R | unacceptable blind spike recovery |

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91352 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 001-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE NO.: 22812 SAS NO.: D. NO.: HQ59 **

| UG/KG | ANALYTICAL RESULTS | UG/KG | ANALYTICAL RESULTS |
|-------|----------------------------------|-------|--------------------------------------|
| 470U | PHENOL | 1200U | 3-NITROANILINE |
| 470U | BIS(2-CHLOROETHYL) ETHER | 470U | ACENAPHTHENE |
| 470U | 2-CHLOROPHENOL | 1200U | 2,4-DINITROPHENOL |
| 470U | 1,3-DICHLOROBENZENE | 1200U | 4-NITROPHENOL |
| 470U | 1,4-DICHLOROBENZENE | 470U | DIBENZOFURAN |
| 470U | 1,2-DICHLOROBENZENE | 470U | 2,4-DINITROTOLUENE |
| 470U | 2-METHYLPHENOL | 470U | DIETHYL PHTHALATE |
| 470U | 2,2'-CHLOROISOPROPYLETHYR | 470U | 4-CHLOROPHENYL PHENYL ETHER |
| 470U | (3-AND/OR 4-)METHYLPHENOL | 470UJ | FLUORENE |
| 470U | N-NITROSODI-N-PROPYLAMINE | 1200U | 4-NITROANILINE |
| 470U | HEXACHLOROETHANE | 1200U | 2-METHYL-4,6-DINITROPHENOL |
| 470U | NITROBENZENE | 470U | N-NITROSODIPHENYLAMINE/DIPHENYLAMINE |
| 470U | ISOPHORONE | 470U | 4-BROMOPHENYL PHENYL ETHER |
| 470U | 2-NITROPHENOL | 470U | HEXACHLOROBENZENE (HCB) |
| 470U | 2,4-DIMETHYLPHENOL | 1200U | PENTACHLOROPHENOL |
| 470U | BIS(2-CHLOROETHOXY) METHANE | 470U | PHENANTHRENE |
| 470U | 2,4-DICHLOROPHENOL | 470U | ANTHRACENE |
| 470U | 1,2,4-TRICHLOROBENZENE | 470U | CARBAZOLE |
| 470U | NAPHTHALENE | 470U | DI-N-BUTYLPHTHALATE |
| 470U | 4-CHLOROANILINE | 470U | FLUORANTHENE |
| 470U | HEXACHLOROBUTADIENE | 470U | PYRENE |
| 470U | 4-CHLORO-3-METHYLPHENOL | 470U | BENZYL BUTYL PHTHALATE |
| 470U | 2-METHYLNAPHTHALENE | 470U | 3,3'-DICHLOROBENZIDINE |
| 470U | HEXACHLOROCYCLOPENTADIENE (HCCP) | 470U | BENZO(A)ANTHRACENE |
| 470UJ | 2,4,6-TRICHLOROPHENOL | 470U | CHRYSENE |
| 1200U | 2,4,5-TRICHLOROPHENOL | 470U | BIS(2-ETHYLHEXYL) PHTHALATE |
| 470U | 2-CHLORONAPHTHALENE | 470U | DI-N-OCTYLPHTHALATE |
| 1200U | 2-NITROANILINE | 470U | BENZO(B AND/OR K)FLUORANTHENE |
| 470U | DIMETHYL PHTHALATE | 470U | BENZO-A-PYRENE |
| 470U | ACENAPHTHYLENE | 470U | INDENO (1,2,3-CD) PYRENE |
| 470U | 2,6-DINITROTOLUENE | 470U | DIBENZO(A,H)ANTHRACENE |
| | | 470U | BENZO(GH)PERYLENE |
| | | 31 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91353 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 002-SS COLLECTION START: 10/27/94 1115 STOP: 00/00/00 **
** CASE NO.: 22812 SAS NO.: D. NO.: HQ60 **

UG/KG ANALYTICAL RESULTS

370U PHENOL
370U BIS(2-CHLOROETHYL) ETHER
370U 2-CHLOROPHENOL
370U 1,3-DICHLOROBENZENE
370U 1,4-DICHLOROBENZENE
370U 1,2-DICHLOROBENZENE
370U 2-METHYLPHENOL
370U 2,2'-CHLOROISOPROPYLETHER
370U (3-AND/OR 4-)METHYLPHENOL
370U N-NITROSODI-N-PROPYLAMINE
370U HEXACHLOROETHANE
370U NITROBENZENE
370U ISOPHORONE
370U 2-NITROPHENOL
370U 2,4-DIMETHYLPHENOL
370U BIS(2-CHLOROETHOXY) METHANE
370U 2,4-DICHLOROPHENOL
370U 1,2,4-TRICHLOROBENZENE
370U NAPHTHALENE
370U 4-CHLOROANILINE
370U HEXACHLOROBUTADIENE
370U 4-CHLORO-3-METHYLPHENOL
370U 2-METHYLNAPHTHALENE
370U HEXACHLOROCYCLOPENTADIENE (HCCP)
370UJ 2,4,6-TRICHLOROPHENOL
930U 2,4,5-TRICHLOROPHENOL
370U 2-CHLORONAPHTHALENE
930U 2-NITROANILINE
370U DIMETHYL PHTHALATE
370U ACENAPHTHYLENE
370U 2,6-DINITROTOLUENE

UG/KG ANALYTICAL RESULTS

930U 3-NITROANILINE
370U ACENAPHTHENE
930U 2,4-DINITROPHENOL
930U 4-NITROPHENOL
370U DIBENZOFURAN
370U 2,4-DINITROTOLUENE
370U DIETHYL PHTHALATE
370U 4-CHLOROPHENYL PHENYL ETHER
370UJ FLUORENE
930U 4-NITROANILINE
930U 2-METHYL-4,6-DINITROPHENOL
370U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
370U 4-BROMOPHENYL PHENYL ETHER
370U HEXACHLOROBENZENE (HCB)
930U PENTACHLOROPHENOL
370U PHENANTHRENE
370U ANTHRACENE
370U CARBAZOLE
370U DI-N-BUTYLPHTHALATE
370U FLUORANTHENE
370U PYRENE
370U BENZYL BUTYL PHTHALATE
370U 3,3'-DICHLOROBENZIDINE
370U BENZO(A)ANTHRACENE
370U CHRYSENE
370U BIS(2-ETHYLHEXYL) PHTHALATE
370U DI-N-OCTYLPHTHALATE
370U BENZO(B AND/OR K)FLUORANTHENE
370U BENZO-A-PYRENE
370U INDENO (1,2,3-CD) PYRENE
370U DIBENZO(A,H)ANTHRACENE
370U BENZO(GH)PERYLENE
11 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91354 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 003-SS COLLECTION START: 10/27/94 1126 STOP: 00/00/00 **
**

*** CASE NO.: 22812 SAS NO.: D. NO.: HQ61 ***

| UG/KG | ANALYTICAL RESULTS | UG/KG | ANALYTICAL RESULTS |
|-------|----------------------------------|-------|--------------------------------------|
| 380U | PHENOL | 970U | 3-NITROANILINE |
| 380U | BIS(2-CHLOROETHYL) ETHER | 380U | ACENAPHTHENE |
| 380U | 2-CHLOROPHENOL | 970U | 2,4-DINITROPHENOL |
| 380U | 1,3-DICHLOROBENZENE | 970U | 4-NITROPHENOL |
| 380U | 1,4-DICHLOROBENZENE | 380U | DIBENZOFURAN |
| 380U | 1,2-DICHLOROBENZENE | 380U | 2,4-DINITROTOLUENE |
| 380U | 2-METHYLPHENOL | 380U | DIETHYL PHTHALATE |
| 380U | 2,2'-CHLOROISOPROPYLETHYR | 380U | 4-CHLOROPHENYL PHENYL ETHER |
| 380U | (3-AND/OR 4-)METHYLPHENOL | 380UJ | FLUORENE |
| 380U | N-NITROSODI-N-PROPYLAMINE | 970U | 4-NITROANILINE |
| 380U | HEXACHLOROETHANE | 970U | 2-METHYL-4,6-DINITROPHENOL |
| 380U | NITROBENZENE | 380U | N-NITROSODIPHENYLAMINE/DIPHENYLAMINE |
| 380U | ISOPHORONE | 380U | 4-BROMOPHENYL PHENYL ETHER |
| 380U | 2-NITROPHENOL | 380U | HEXACHLOROBENZENE (HCB) |
| 380U | 2,4-DIMETHYLPHENOL | 970U | PENTACHLOROPHENOL |
| 380U | BIS(2-CHLOROETHOXY) METHANE | 380U | PHENANTHRENE |
| 380U | 2,4-DICHLOROPHENOL | 380U | ANTHRACENE |
| 380U | 1,2,4-TRICHLOROBENZENE | 380U | CARBAZOLE |
| 380U | NAPHTHALENE | 380U | DI-N-BUTYLPHTHALATE |
| 380U | 4-CHLOROANILINE | 380U | FLUORANTHENE |
| 380U | HEXACHLOROBUTADIENE | 380U | PYRENE |
| 380U | 4-CHLORO-3-METHYLPHENOL | 380U | BENZYL BUTYL PHTHALATE |
| 380U | 2-METHYLNAPHTHALENE | 380U | 3,3'-DICHLOROBENZIDINE |
| 380U | HEXACHLOROCYCLOPENTADIENE (HCCP) | 380U | BENZO(A)ANTHRACENE |
| 380UJ | 2,4,6-TRICHLOROPHENOL | 380U | CHRYSENE |
| 970U | 2,4,5-TRICHLOROPHENOL | 380U | BIS(2-ETHYLHEXYL) PHTHALATE |
| 380U | 2-CHLORONAPHTHALENE | 380U | DI-N-OCTYLPHTHALATE |
| 970U | 2-NITROANILINE | 380U | BENZO(B AND/OR K)FLUORANTHENE |
| 380U | DIMETHYL PHTHALATE | 380U | BENZO-A-PYRENE |
| 380U | ACENAPHTHYLENE | 380U | INDENO (1,2,3-CD) PYRENE |
| 380U | 2,6-DINITROTOLUENE | 380U | DIBENZO(A,H)ANTHRACENE |
| | | 380U | BENZO(GHI)PERYLENE |
| | | 16 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

EXTRACTABLE ORGANICS DATA REPORT

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*** **
** PROJECT NO. 95-0050  SAMPLE NO. 91355  SAMPLE TYPE: SOIL  PROG ELEM: NSF  COLLECTED BY: F.M. CARNS  **
** SOURCE: SEA GALLEY CLUB  CITY: GOOSE CREE  ST: SC  **
** STATION ID: 004-SS  COLLECTION START: 10/27/94  1138  STOP: 00/00/00  **
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*** CASE NO.: 22812  SAS NO.:  D. NO.: HQ62  **
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UG/KG ANALYTICAL RESULTS

UG/KG ANALYTICAL RESULTS

480U PHENOL
480U BIS(2-CHLOROETHYL) ETHER
480U 2-CHLOROPHENOL
480U 1,3-DICHLOROBENZENE
480U 1,4-DICHLOROBENZENE
480U 1,2-DICHLOROBENZENE
480U 2-METHYLPHENOL
480U 2,2'-CHLOROISOPROPYLETHYR
480U (3-AND/OR 4-)METHYLPHENOL
480U N-NITROSODI-N-PROPYLAMINE
480U HEXACHLOROETHANE
480U NITROBENZENE
480U ISOPHORONE
480U 2-NITROPHENOL
480U 2,4-DIMETHYLPHENOL
480U BIS(2-CHLOROETHOXY) METHANE
480U 2,4-DICHLOROPHENOL
480U 1,2,4-TRICHLOROBENZENE
480U NAPHTHALENE
480U 4-CHLOROANILINE
480U HEXACHLOROBUTADIENE
480U 4-CHLORO-3-METHYLPHENOL
480U 2-METHYLNAPHTHALENE
480U HEXACHLOROCYCLOPENTADIENE (HCCP)
480UJ 2,4,6-TRICHLOROPHENOL
1200U 2,4,5-TRICHLOROPHENOL
480U 2-CHLORONAPHTHALENE
1200U 2-NITROANILINE
480U DIMETHYL PHTHALATE
480U ACENAPHTHYLENE
480U 2,6-DINITROTOLUENE

1200U 3-NITROANILINE
480U ACENAPHTHENE
1200U 2,4-DINITROPHENOL
1200U 4-NITROPHENOL
480U DIBENZOFURAN
480U 2,4-DINITROTOLUENE
480U DIETHYL PHTHALATE
480U 4-CHLOROPHENYL PHENYL ETHER
480UJ FLUORENE
1200U 4-NITROANILINE
1200U 2-METHYL-4,6-DINITROPHENOL
480U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
480U 4-BROMOPHENYL PHENYL ETHER
480U HEXACHLOROBENZENE (HCB)
1200U PENTACHLOROPHENOL
50J PHENANTHRENE
480U ANTHRACENE
480U CARBAZOLE
480U DI-N-BUTYLPHTHALATE
250J FLUORANTHENE
270J PYRENE
480U BENZYL BUTYL PHTHALATE
480U 3,3'-DICHLOROBENZIDINE
480U BENZO(A)ANTHRACENE
190J CHRYSENE
480U BIS(2-ETHYLHEXYL) PHTHALATE
480U DI-N-OCTYLPHTHALATE
390J BENZO(B AND/OR K)FLUORANTHENE
94J BENZO-A-PYRENE
130J INDENO (1,2,3-CD) PYRENE
480U DIBENZO(A,H)ANTHRACENE
130J BENZO(GH)PERYLENE
32 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91356 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 005-SD COLLECTION START: 10/27/94 1153 STOP: 00/00/00 **
**
** CASE NO.: 22812 SAS NO.: D. NO.: HQ63 **

| UG/KG | ANALYTICAL RESULTS | UG/KG | ANALYTICAL RESULTS |
|-------|----------------------------------|-------|--------------------------------------|
| 510U | PHENOL | 1300U | 3-NITROANILINE |
| 510U | BIS(2-CHLOROETHYL) ETHER | 510U | ACENAPHTHENE |
| 510U | 2-CHLOROPHENOL | 1300U | 2,4-DINITROPHENOL |
| 510U | 1,3-DICHLOROBENZENE | 1300U | 4-NITROPHENOL |
| 510U | 1,4-DICHLOROBENZENE | 510U | DIBENZOFURAN |
| 510U | 1,2-DICHLOROBENZENE | 510U | 2,4-DINITROTOLUENE |
| 510U | 2-METHYLPHENOL | 510U | DIETHYL PHTHALATE |
| 510U | 2,2'-CHLOROISOPROPYLETHER | 510U | 4-CHLOROPHENYL PHENYL ETHER |
| 510U | (3-AND/OR 4-)METHYLPHENOL | 510UJ | FLUORENE |
| 510U | N-NITROSODI-N-PROPYLAMINE | 1300U | 4-NITROANILINE |
| 510U | HEXACHLOROETHANE | 1300U | 2-METHYL-4,6-DINITROPHENOL |
| 510U | NITROBENZENE | 510U | N-NITROSODIPHENYLAMINE/DIPHENYLAMINE |
| 510U | ISOPHORONE | 510U | 4-BROMOPHENYL PHENYL ETHER |
| 510U | 2-NITROPHENOL | 510U | HEXACHLOROBENZENE (HCB) |
| 510U | 2,4-DIMETHYLPHENOL | 1300U | PENTACHLOROPHENOL |
| 510U | BIS(2-CHLOROETHOXY) METHANE | 510U | PHENANTHRENE |
| 510U | 2,4-DICHLOROPHENOL | 510U | ANTHRACENE |
| 510U | 1,2,4-TRICHLOROBENZENE | 510U | CARBAZOLE |
| 510U | NAPHTHALENE | 510U | DI-N-BUTYLPHTHALATE |
| 510U | 4-CHLOROANILINE | 510U | FLUORANTHENE |
| 510U | HEXACHLOROBUTADIENE | 510U | PYRENE |
| 510U | 4-CHLORO-3-METHYLPHENOL | 510U | BENZYL BUTYL PHTHALATE |
| 510U | 2-METHYLNAPHTHALENE | 510U | 3,3'-DICHLOROBENZIDINE |
| 510U | HEXACHLOROCYCLOPENTADIENE (HCCP) | 510U | BENZO(A)ANTHRACENE |
| 510UJ | 2,4,6-TRICHLOROPHENOL | 510U | CHRYSENE |
| 1300U | 2,4,5-TRICHLOROPHENOL | 510U | BIS(2-ETHYLHEXYL) PHTHALATE |
| 510U | 2-CHLORONAPHTHALENE | 510U | DI-N-OCTYLPHTHALATE |
| 1300U | 2-NITROANILINE | 510U | BENZO(B AND/OR K)FLUORANTHENE |
| 510U | DIMETHYL PHTHALATE | 510U | BENZO-A-PYRENE |
| 510U | ACENAPHTHYLENE | 510U | INDENO (1,2,3-CD) PYRENE |
| 510U | 2,6-DINITROTOLUENE | 510U | DIBENZO(A,H)ANTHRACENE |
| | | 510U | BENZO(GH)PERYLENE |
| | | 36 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91357 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 008-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **

*** CASE NO.: 22812 SAS NO.: D. NO.: HQ64 ***

| UG/KG | ANALYTICAL RESULTS | UG/KG | ANALYTICAL RESULTS |
|-------|----------------------------------|-------|--------------------------------------|
| 450U | PHENOL | 1100U | 3-NITROANILINE |
| 450U | BIS(2-CHLOROETHYL) ETHER | 450U | ACENAPHTHENE |
| 450U | 2-CHLOROPHENOL | 1100U | 2,4-DINITROPHENOL |
| 450U | 1,3-DICHLOROBENZENE | 1100U | 4-NITROPHENOL |
| 450U | 1,4-DICHLOROBENZENE | 450U | DIBENZOFURAN |
| 450U | 1,2-DICHLOROBENZENE | 450U | 2,4-DINITROTOLUENE |
| 450U | 2-METHYLPHENOL | 450U | DIETHYL PHTHALATE |
| 450U | 2,2'-CHLOROISOPROPYLETHYR | 450U | 4-CHLOROPHENYL PHENYL ETHER |
| 450U | (3-AND/OR 4-)METHYLPHENOL | 450UJ | FLUORENE |
| 450U | N-NITROSODI-N-PROPYLAMINE | 1100U | 4-NITROANILINE |
| 450U | HEXACHLOROETHANE | 1100U | 2-METHYL-4,6-DINITROPHENOL |
| 450U | NITROBENZENE | 450U | N-NITROSODIPHENYLAMINE/DIPHENYLAMINE |
| 450U | ISOPHORONE | 450U | 4-BROMOPHENYL PHENYL ETHER |
| 450U | 2-NITROPHENOL | 450U | HEXACHLOROBENZENE (HCB) |
| 450U | 2,4-DIMETHYLPHENOL | 1100U | PENTACHLOROPHENOL |
| 450U | BIS(2-CHLOROETHOXY) METHANE | 450U | PHENANTHRENE |
| 450U | 2,4-DICHLOROPHENOL | 450U | ANTHRACENE |
| 450U | 1,2,4-TRICHLOROBENZENE | 450U | CARBAZOLE |
| 450U | NAPHTHALENE | 450U | DI-N-BUTYLPHTHALATE |
| 450U | 4-CHLOROANILINE | 450U | FLUORANTHENE |
| 450U | HEXACHLOROBUTADIENE | 450U | PYRENE |
| 450U | 4-CHLORO-3-METHYLPHENOL | 450U | BENZYL BUTYL PHTHALATE |
| 450U | 2-METHYLNAPHTHALENE | 450U | 3,3'-DICHLOROBENZIDINE |
| 450U | HEXACHLOROCYCLOPENTADIENE (HCCP) | 450U | BENZO(A)ANTHRACENE |
| 450UJ | 2,4,6-TRICHLOROPHENOL | 450U | CHRYSENE |
| 1100U | 2,4,5-TRICHLOROPHENOL | 450U | BIS(2-ETHYLHEXYL) PHTHALATE |
| 450U | 2-CHLORONAPHTHALENE | 450U | DI-N-OCTYLPHTHALATE |
| 1100U | 2-NITROANILINE | 450U | BENZO(B AND/OR K)FLUORANTHENE |
| 450U | DIMETHYL PHTHALATE | 450U | BENZO-A-PYRENE |
| 450U | ACENAPHTHYLENE | 450U | INDENO (1,2,3-CD) PYRENE |
| 450U | 2,6-DINITROTOLUENE | 450U | DIBENZO(A,H)ANTHRACENE |
| | | 450U | BENZO(GH)PERYLENE |
| | | 29 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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TOT02\$DISK:[ESAT]PRODCMET.LST;1

TOT02\$DISK:[ESAT]PRODCPCB.LST;1

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91352 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 001-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ59 MD NO: HQ59 **
**

ANALYTICAL RESULTS UG/KG

8000J 3 UNIDENTIFIED COMPOUNDS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91353 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 002-SS COLLECTION START: 10/27/94 1115 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ60 MD NO: HQ60 **

ANALYTICAL RESULTS UG/KG

500J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91354 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 003-SS COLLECTION START: 10/27/94 1126 STOP: 00/00/00 **
** CASE NO.: 22812 SAS NO.: D. NO.: HQ61 MD NO: HQ61 **

ANALYTICAL RESULTS UG/KG

2000J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91355 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 004-SS COLLECTION START: 10/27/94 1138 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ62 MD NO: HQ62 **

ANALYTICAL RESULTS UG/KG

500J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91356 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 005-SD COLLECTION START: 10/27/94 1153 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ63 MD NO: HQ63 **

ANALYTICAL RESULTS UG/KG

2000J 3 UNIDENTIFIED COMPOUNDS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91357 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 008-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ64 MD NO: HQ64 **

ANALYTICAL RESULTS UG/KG

6000J 2 UNIDENTIFIED COMPOUNDS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

TO:02\$DISK:[ESAT]PRODPCBMISC.LST;1

TOTO2\$DISK:[ESAT]PRODSPECIFY.LST;1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

RECEIVED

*****MEMORANDUM*****

DEC 12 1994

DATE: 12/13/94

SITE ENGINEERING & SCREENING
BSHWM

SUBJECT: Results of Purgeable Organic Analysis;
95-0050 SEA GALLEY CLUB
GOOSE CREE SC
CASE NO: 22812

FROM: *CH* Charles H. Hooper *CH Hooper*
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOHN CRISWELL

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

ORGANIC DATA QUALIFIER REPORT

Case Number 22812 Project Number 95-0050 SAS Number
Site ID. Sea Galley Club, Goose Cree, SC

| <u>Affected Samples</u> | <u>Compound or Fraction</u> | <u>Flag Used</u> | <u>Reason</u> |
|-------------------------|-----------------------------|----------------------|---|
| <u>Volatiles</u> | | | |
| 91352 | toluene | J | < quantitation limit |
| 91353, 91354 | acetone | J N | erratic response factor common lab contaminant |
| 91355 | xylene | J | < quantitation limit |
| <u>Extractables</u> | | | |
| all samples | 2,4,6-trichlorophenol | J | low blind spike recovery |
| | fluorene | J | low blind spike recovery |
| 91355 | phenanthrene | J | < quantitation limit |
| | fluoranthene | J | < quantitation limit |
| | pyrene | J | < quantitation limit |
| | chrysene | J | < quantitation limit |
| | benzo(b/k)fluoranthene | J | < quantitation limit |
| | benzo(a)pyrene | J | < quantitation limit |
| | indeno(1,2,3-cd)pyrene | J | < quantitation limit |
| | benzo(g,h,i)perylene | J | < quantitation limit |
| <u>Pesticides</u> | | | |
| all samples | endrin aldehyde | R | unacceptable blind spike recovery |

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PURGEABLE ORGANICS DATA REPORT

*** ** ** ** **
** PROJECT NO. 95-0050 SAMPLE NO. 91352 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 001-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE NO.: 22812 SAS NO.: D. NO.: HQ59 **
*** ** ** ** **

UG/KG ANALYTICAL RESULTS
14U CHLOROMETHANE
14U BROMOMETHANE
14U VINYL CHLORIDE
14U CHLOROETHANE
60U METHYLENE CHLORIDE
14U ACETONE
14U CARBON DISULFIDE
14U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
14U 1,1-DICHLOROETHANE
14U 1,2-DICHLOROETHENE (TOTAL)
14U CHLOROFORM
14U 1,2-DICHLOROETHANE
14U METHYL ETHYL KETONE
14U 1,1,1-TRICHLOROETHANE
14U CARBON TETRACHLORIDE
14U BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS
14U 1,2-DICHLOROPROPANE
14U CIS-1,3-DICHLOROPROPENE
14U TRICHLOROETHENE(TRICHLOROETHYLENE)
14U DIBROMOCHLOROMETHANE
14U 1,1,2-TRICHLOROETHANE
14U BENZENE
14U TRANS-1,3-DICHLOROPROPENE
14U BROMOFORM
14U METHYL ISOBUTYL KETONE
14U METHYL BUTYL KETONE
14U TETRACHLOROETHENE(TETRACHLOROETHYLENE)
14U 1,1,2,2-TETRACHLOROETHANE
2J TOLUENE
14U CHLOROBENZENE
14U ETHYL BENZENE
14U STYRENE
14U TOTAL XYLENES
31 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PURGEABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91353 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 002-SS COLLECTION START: 10/27/94 1115 STOP: 00/00/00 **
**
** CASE NO.: 22812 SAS NO.: D. NO.: HQ60 **

UG/KG ANALYTICAL RESULTS

11U CHLOROMETHANE
11U BROMOMETHANE
11U VINYL CHLORIDE
11U CHLOROETHANE
30U METHYLENE CHLORIDE
16NJ ACETONE
11U CARBON DISULFIDE
11U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
11U 1,1-DICHLOROETHANE
11U 1,2-DICHLOROETHENE (TOTAL)
11U CHLOROFORM
11U 1,2-DICHLOROETHANE
11U METHYL ETHYL KETONE
11U 1,1,1-TRICHLOROETHANE
11U CARBON TETRACHLORIDE
11U BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS

11U 1,2-DICHLOROPROPANE
11U CIS-1,3-DICHLOROPROPENE
11U TRICHLOROETHENE(TRICHLOROETHYLENE)
11U DIBROMOCHLOROMETHANE
11U 1,1,2-TRICHLOROETHANE
11U BENZENE
11U TRANS-1,3-DICHLOROPROPENE
11U BROMOFORM
11U METHYL ISOBUTYL KETONE
11U METHYL BUTYL KETONE
11U TETRACHLOROETHENE(TETRACHLOROETHYLENE)
11U 1,1,2,2-TETRACHLOROETHANE
11U TOLUENE
11U CHLOROBENZENE
11U ETHYL BENZENE
11U STYRENE
11U TOTAL XYLENES
11 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PURGEABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91354 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 003-SS COLLECTION START: 10/27/94 1126 STOP: 00/00/00 **
**
** CASE NO.: 22812 SAS NO.: D. NO.: HQ61 **

| UG/KG | ANALYTICAL RESULTS |
|-------|--|
| 12U | CHLOROMETHANE |
| 12U | BROMOMETHANE |
| 12U | VINYL CHLORIDE |
| 12U | CHLOROETHANE |
| 30U | METHYLENE CHLORIDE |
| 21NJ | ACETONE |
| 12U | CARBON DISULFIDE |
| 12U | 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE) |
| 12U | 1,1-DICHLOROETHANE |
| 12U | 1,2-DICHLOROETHENE (TOTAL) |
| 12U | CHLOROFORM |
| 12U | 1,2-DICHLOROETHANE |
| 12U | METHYL ETHYL KETONE |
| 12U | 1,1,1-TRICHLOROETHANE |
| 12U | CARBON TETRACHLORIDE |
| 12U | BROMODICHLOROMETHANE |

| UG/KG | ANALYTICAL RESULTS |
|-------|--|
| 12U | 1,2-DICHLOROPROPANE |
| 12U | CIS-1,3-DICHLOROPROPENE |
| 12U | TRICHLOROETHENE(TRICHLOROETHYLENE) |
| 12U | DIBROMOCHLOROMETHANE |
| 12U | 1,1,2-TRICHLOROETHANE |
| 12U | BENZENE |
| 12U | TRANS-1,3-DICHLOROPROPENE |
| 12U | BROMOFORM |
| 12U | METHYL ISOBUTYL KETONE |
| 12U | METHYL BUTYL KETONE |
| 12U | TETRACHLOROETHENE(TETRACHLOROETHYLENE) |
| 12U | 1,1,2,2-TETRACHLOROETHANE |
| 12U | TOLUENE |
| 12U | CHLOROBENZENE |
| 12U | ETHYL BENZENE |
| 12U | STYRENE |
| 12U | TOTAL XYLENES |
| 16 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PURGEABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91355 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 004-SS COLLECTION START: 10/27/94 1138 STOP: 00/00/00 **

** CASE NO.: 22812 SAS NO.: D. NO.: HQ62 **

UG/KG ANALYTICAL RESULTS

15U CHLOROMETHANE
15U BROMOMETHANE
15U VINYL CHLORIDE
15U CHLOROETHANE
40U METHYLENE CHLORIDE
15U ACETONE
15U CARBON DISULFIDE
15U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
15U 1,1-DICHLOROETHANE
15U 1,2-DICHLOROETHENE (TOTAL)
15U CHLOROFORM
15U 1,2-DICHLOROETHANE
15U METHYL ETHYL KETONE
15U 1,1,1-TRICHLOROETHANE
15U CARBON TETRACHLORIDE
15U BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS

15U 1,2-DICHLOROPROPANE
15U CIS-1,3-DICHLOROPROPENE
15U TRICHLOROETHENE(TRICHLOROETHYLENE)
15U DIBROMOCHLOROMETHANE
15U 1,1,2-TRICHLOROETHANE
15U BENZENE
15U TRANS-1,3-DICHLOROPROPENE
15U BROMOFORM
15U METHYL ISOBUTYL KETONE
15U METHYL BUTYL KETONE
15U TETRACHLOROETHENE(TETRACHLOROETHYLENE)
15U 1,1,2,2-TETRACHLOROETHANE
15U TOLUENE
15U CHLOROBENZENE
15U ETHYL BENZENE
15U STYRENE
2J TOTAL XYLENES
32 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PURGEABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91356 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 005-SD COLLECTION START: 10/27/94 1153 STOP: 00/00/00 **
** CASE NO.: 22812 SAS NO.: D. NO.: HQ63 **

UG/KG ANALYTICAL RESULTS

16U CHLOROMETHANE
16U BROMOMETHANE
16U VINYL CHLORIDE
16U CHLOROETHANE
40U METHYLENE CHLORIDE
16U ACETONE
16U CARBON DISULFIDE
16U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
16U 1,1-DICHLOROETHANE
16U 1,2-DICHLOROETHENE (TOTAL)
16U CHLOROFORM
16U 1,2-DICHLOROETHANE
16U METHYL ETHYL KETONE
16U 1,1,1-TRICHLOROETHANE
16U CARBON TETRACHLORIDE
16U BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS

16U 1,2-DICHLOROPROPANE
16U CIS-1,3-DICHLOROPROPENE
16U TRICHLOROETHENE(TRICHLOROETHYLENE)
16U DIBROMOCHLOROMETHANE
16U 1,1,2-TRICHLOROETHANE
16U BENZENE
16U TRANS-1,3-DICHLOROPROPENE
16U BROMOFORM
16U METHYL ISOBUTYL KETONE
16U METHYL BUTYL KETONE
16U TETRACHLOROETHENE(TETRACHLOROETHYLENE)
16U 1,1,2,2-TETRACHLOROETHANE
16U TOLUENE
16U CHLOROBENZENE
16U ETHYL BENZENE
16U STYRENE
16U TOTAL XYLENES
36 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PURGEABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91357 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 008-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
**

*** CASE NO.: 22812 SAS NO.: D. NO.: HQ64 ***

| UG/KG | ANALYTICAL RESULTS | UG/KG | ANALYTICAL RESULTS |
|-------|---|-------|---|
| 14U | CHLOROMETHANE | 14U | 1,2-DICHLOROPROPANE |
| 14U | BROMOMETHANE | 14U | CIS-1,3-DICHLOROPROPENE |
| 14U | VINYL CHLORIDE | 14U | TRICHLOROETHENE (TRICHLOROETHYLENE) |
| 14U | CHLOROETHANE | 14U | DIBROMOCHLOROMETHANE |
| 30U | METHYLENE CHLORIDE | 14U | 1,1,2-TRICHLOROETHANE |
| 14U | ACETONE | 14U | BENZENE |
| 14U | CARBON DISULFIDE | 14U | TRANS-1,3-DICHLOROPROPENE |
| 14U | 1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE) | 14U | BROMOFORM |
| 14U | 1,1-DICHLOROETHANE | 14U | METHYL ISOBUTYL KETONE |
| 14U | 1,2-DICHLOROETHENE (TOTAL) | 14U | METHYL BUTYL KETONE |
| 14U | CHLOROFORM | 14U | TETRACHLOROETHENE (TETRACHLOROETHYLENE) |
| 14U | 1,2-DICHLOROETHANE | 14U | 1,1,2,2-TETRACHLOROETHANE |
| 14U | METHYL ETHYL KETONE | 14U | TOLUENE |
| 14U | 1,1,1-TRICHLOROETHANE | 14U | CHLOROBENZENE |
| 14U | CARBON TETRACHLORIDE | 14U | ETHYL BENZENE |
| 14U | BROMODICHLOROMETHANE | 14U | STYRENE |
| | | 14U | TOTAL XYLENES |
| | | 29 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91352 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 001-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ59 MD NO: HQ59 **
**

ANALYTICAL RESULTS UG/KG

90J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91353 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 002-SS COLLECTION START: 10/27/94 1115 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ60 MD NO: HQ60 **
**

ANALYTICAL RESULTS UG/KG

20J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91354 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 003-SS COLLECTION START: 10/27/94 1126 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ61 MD NO: HQ61 **

ANALYTICAL RESULTS UG/KG

30J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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**TRIP REPORT
SCREENING SITE INVESTIGATION
SEA GALLEY CLUB/GALLEY HALL
SCD 987 566 452**

**Prepared By: Greg George *gg*
Site Screening Section
Bureau of Solid and Hazardous Waste Management
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201**

Date: June 1, 1995

BACKGROUND

Site History and Description

The Sea Galley Club is located in Goose Creek, Berkeley County, South Carolina. It is located on the south side of Red Bank Road. The site is in a commercial setting with no nearby residents. The site coordinates are 32 degrees 58 minutes 4.6 seconds north latitude, and 80 degrees 00 minutes 16.7 seconds west longitude.

The total area of the property is three acres. One building divided into two businesses sits atop the property which is mostly paved. The property is not surrounded by a maintained fence. The topography is generally flat with a slight slope westward. A ditch bordering the south and west sides of the site collects run-off from the site. There is not a well defined surface water pathway. Instead, water flows westward into a low boggy area where cattails have been observed.

The property owner unknowingly stored hazardous materials on-site for approximately six months in the late 1980's. Sixty drums containing paint waste/solvents were removed along with some soil and disposed of properly. No other waste activities have occurred at the site.

Sampling Trip

The Sea Galley Club site was sampled on October 27, 1994. The sampling team consisted of SCDHEC personnel, the site owner was not present. Five soil samples and one duplicate sample were collected on and around the site.

SAMPLING INVESTIGATION

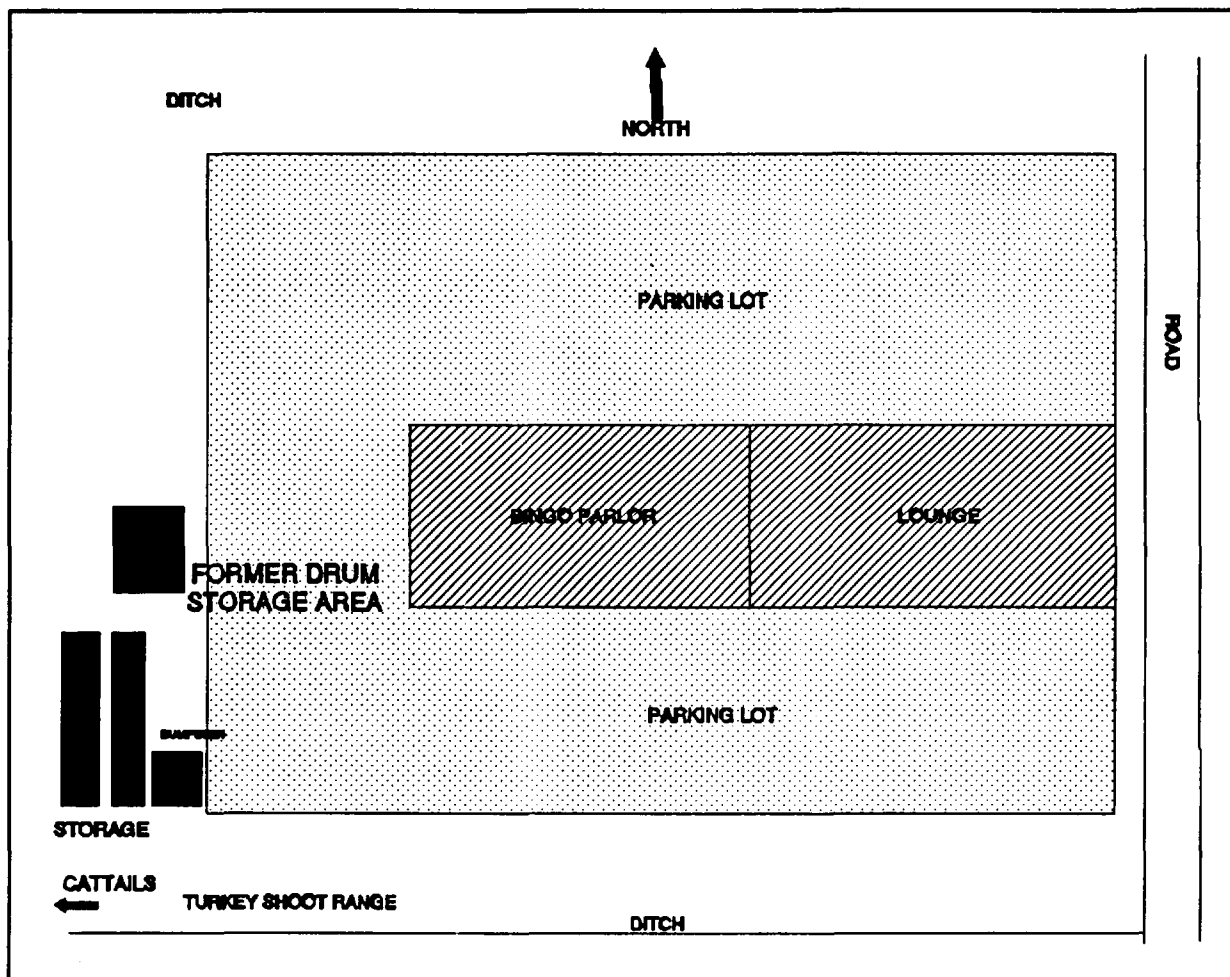
Sampling Strategy, Locations, and Options

The site owner was offered the opportunity to split samples and declined. The following samples were collected to assess the impact of the waste disposal activities at the Sea Galley Club site:

| Sample Type | Sample # | Location/Description |
|--------------------|-----------------|---|
| Surface Soil | SG-001-SS | This sample was collected from the wooded area across the road from the site, ten yards from the road. The sample was collected from the top three inches of soil and was comprised of dark brown sandy soil and some gray clay. The sample was taken as a background sample. SG-008-SS was collected as a duplicate sample. |
| Surface Soil | SG-002-SS | This sample was collected from an area north of the club parking lot. The sample was collected from the top three inches of soil and was comprised of a light colored fine to medium course sand. The sample was collected as a background/control sample. |
| Surface Soil | SG-003-SS | This sample was collected from the soil adjacent to the former disposal/storage area. It was collected from the top four inches of soil and was comprised of mixed dark brown organic and light gray sandy material. The sample may have consisted of fill material. The sample was collected to determine on-site waste characteristics. |
| Surface Soil | SG-004-SS | This sample was collected from an area near the former disposal/storage area. It was collected from the top few inches of soil and was comprised of the same materials as described in the previous sample. The sample was collected to help determine on-site waste characteristics. |

Surface Soil/Sediment SG-005-SD

This sample was collected from the low area west of the site. It was collected from the top two feet of sediment and consisted of a fine silty organic material. The sample was collected to determine if on-site waste is migrating into the ditch.



Ref. 11

**SAMPLING PLAN
SCREENING SITE INVESTIGATION
SEA GALLEY CLUB/GALLEY HALL
SCD 987 566 452**

Prepared By: Greg George *GG*
Site Screening Section
Bureau of Solid and Hazardous Waste Management
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Date: October 14, 1994

cc: Harold Seabrook
Bubba Carns
Trident District, EQC

BACKGROUND

Permits and Authorization Requirements

Permission to sample has been obtained from Jasin Travis (b)(6) Personal Privacy the site owner. Sampling activities will take place on October 27, 1994.

Site History and Description

The Sea Galley Club is located in Goose Creek, Berkeley County, South Carolina. It is located on the south side of Red Bank Road. The site is in a commercial setting with no nearby residents. The site coordinates are 32 degrees 58 minutes 4.6 seconds north latitude, and 80 degrees 00 minutes 16.7 seconds west longitude.

The total area of the property is three acres. One building divided into two businesses sits atop the property which is mostly paved. The property is not surrounded by a maintained fence. The topography is generally flat with a slight slope westward. A ditch bordering the south and west sides of the site collects run-off from the site. There is not a well defined surface water pathway. Instead, water flows westward into a low boggy area where cattails have been observed.

The property owner unknowingly stored hazardous materials on-site for approximately six months in the late 1980's. Sixty drums containing paint waste/solvents were removed along with some soil and disposed of properly. No other waste activities have occurred at the site.

SAMPLING INVESTIGATION

Sampling Strategy, Locations, and Options

The site owner has been offered the opportunity to split samples and has expressed a desire not to obtain split samples. The following samples are proposed to assess the impact of the waste disposal activities at the Sea Galley Club site:

| Sample Type | Sample # | Location/Rationale/Options |
|-----------------------|-----------------|---|
| Surface Soil | SG-001-SS | This sample will be collected from an area across the road from the site. The sample will be collected from the top two feet of soil. The sample is to be used as a background sample. |
| Surface Soil | SG-002-SS | This sample will be collected from an area north of the site. The sample will be collected from the top two feet of soil. The sample is to be used as a background/control sample. |
| Surface Soil | SG-003-SS | This sample will be collected from the disposal area. It will be collected from the top two feet of soil. The sample is being collected to determine on-site waste characteristics. |
| Surface Soil | SG-004-SS | This sample will be collected from the disposal area. It will be collected from the top two feet of soil. The sample is being collected to determine on-site waste characteristics. |
| Surface Soil/Sediment | SG-005-SD | This sample will be collected from the low area west of the site. It will be collected from the top two feet of soil/sediment. The sample is being collected to determine if on-site waste is migrating into the ditch. |

Analytical Parameters Requested

Samples from both media will be analyzed for the chemicals found in the EPA Target Compounds List (TCL).

APPENDIX

STANDARD SAMPLE CODES

Water Samples

PW-Private Well
PB-Public (Municipal) Well
MW-Monitoring (Permanent) Well
IW-Industrial Well
SW-Surface Water
SP-Spring Water
LW-Leachate Water
TW-Temporary Well Point

Soil Samples

SS-Surface Soil
SB-Subsurface Soil
SZ-Saturation Zone
SD-Sediment
CS-Composite Soil (SS or SB)
LS-Leachate Soil
CB-Composite Soil Boring

Other Codes

SL-SLUDGE
WA-WASTE (as in, waste piles)
DR-DRUM
****QC**-Quality Control

All samples codes will consist of at least 6 characters in the following format:

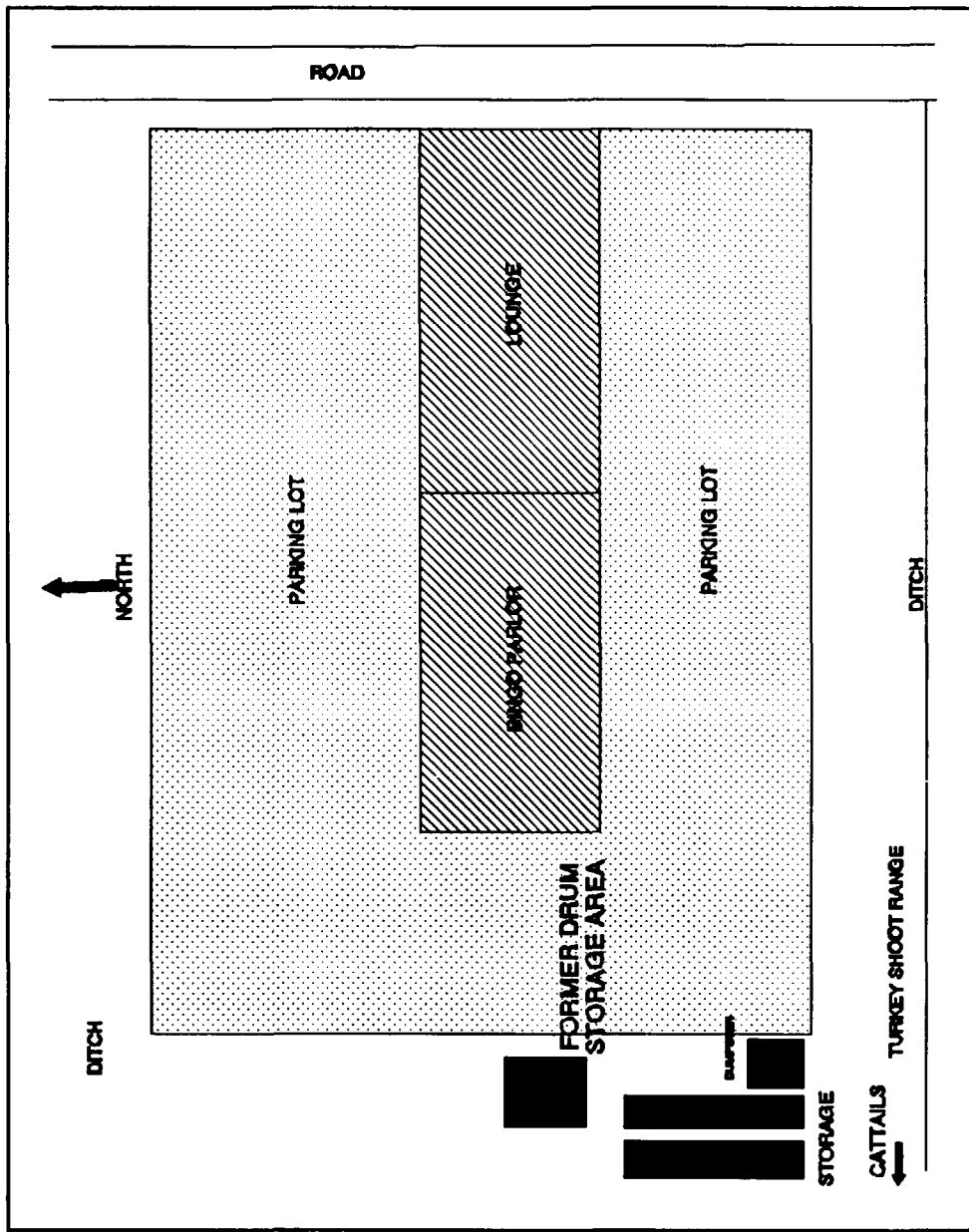
Site Name - Sample Location Number - Sample Type

Example: Standard Auto Sampling Investigation - Sample-Number 008 - Temporary Well

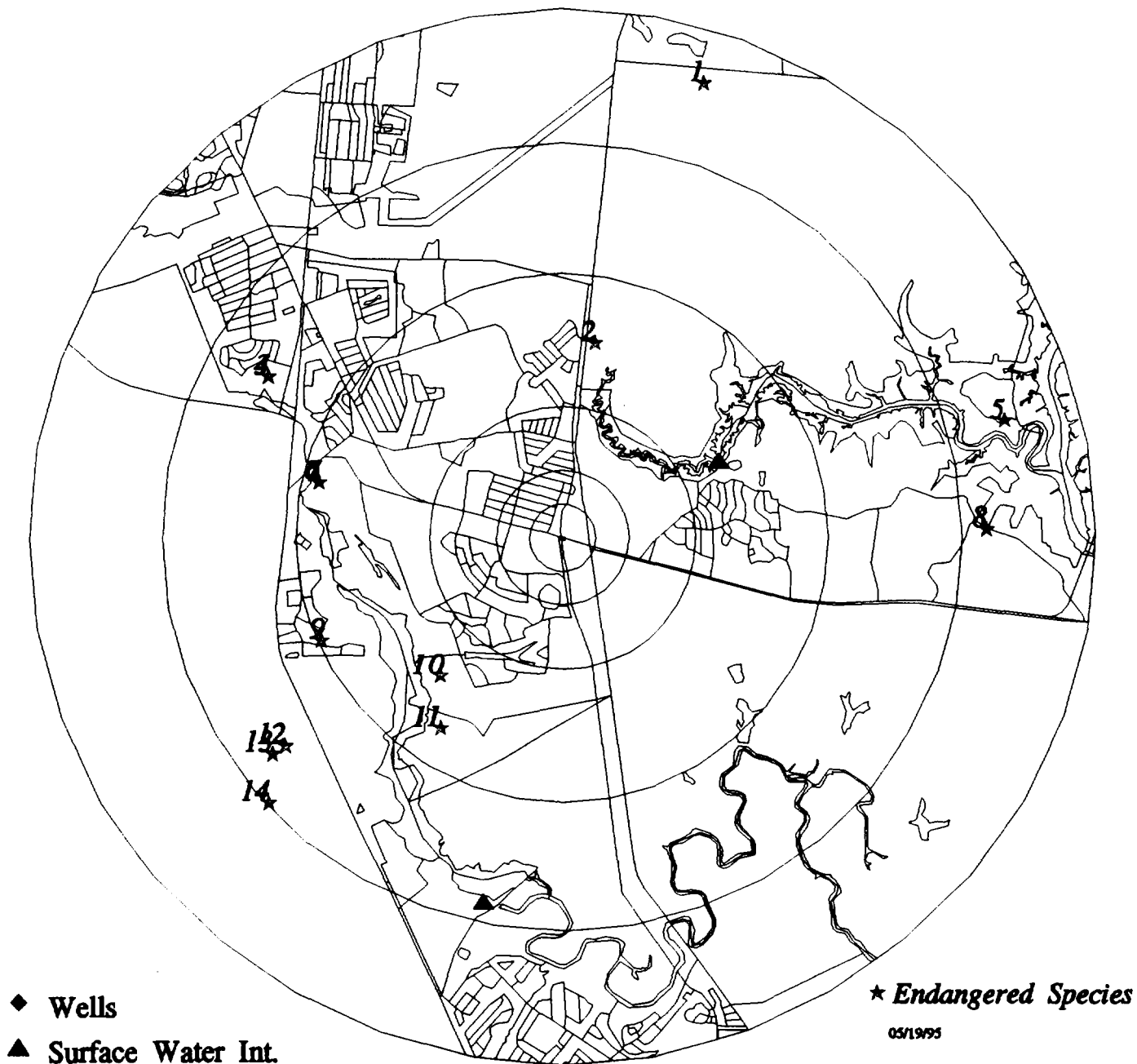
Appropriate code: SA-008-TW

If you need additional identity for a particular sample location, add a suffix.

****The QC sample code is usually for drilling water and sand pack samples and not for the Blank and Spike samples. Please disguise the Blank and Spike samples as one of the series of samples from the appropriate medium.**



Sea-Galley
 'SCD 987 566 452'
 'Berkeley County', SC



Population Estimates Given in Range of Miles:

| | | | |
|--------------------|-------|-------------|-------|
| Total Population = | 51783 | .50 - 1 = | 8701y |
| 3 - 4 = | 21392 | .25 - .50 = | 3613 |
| 2 - 3 = | 8973 | 0 - .25 = | 192 |
| 1 - 2 = | 8912 | | |

- 1 COLONIAL WATERHEN
- 2 BLUEFIN KILLIFISH
- 3 COLONIAL WATERHEN
- 4 COLONIAL WATERHEN
- 5 BALD EAGLE
- 6 BLACK SWAMP SNA
- 7 EASTERN WOODRAI
- 8 FLORIDA GREEN W/
- 9 EASTERN WOODRAI
- 10 BALD EAGLE
- 11 BALD EAGLE
- 12 LEAST TERN
- 13 LEAST TERN
- 14 CHAFFERD

OVERSIZED

DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM*****

DATE: 12/13/94

SUBJECT: Results of Purgeable Organic Analysis;
95-0050 SEA GALLEY CLUB
GOOSE CREE SC
CASE NO: 22812

FROM: Charles H. Hooper
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOHN CRISWELL

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

• ATTACHMENT

ORGANIC DATA QUALIFIER REPORT

Case Number 22812 Project Number 95-0050 SAS Number
Site ID. Sea Galley Club, Goose Cree, SC

| <u>Affected Samples</u> | <u>Compound or Fraction</u> | <u>Flag Used</u> | <u>Reason</u> |
|-------------------------|-----------------------------|----------------------|---|
| <u>Volatiles</u> | | | |
| 91352 | toluene | J | < quantitation limit |
| 91353, 91354 | acetone | J N | erratic response factor common lab contaminant |
| 91355 | xylene | J | < quantitation limit |
| <u>Extractables</u> | | | |
| all samples | 2,4,6-trichlorophenol | J | low blind spike recovery |
| | fluorene | J | low blind spike recovery |
| 91355 | phenanthrene | J | < quantitation limit |
| | fluoranthene | J | < quantitation limit |
| | pyrene | J | < quantitation limit |
| | chrysene | J | < quantitation limit |
| | benzo(b/k)fluoranthene | J | < quantitation limit |
| | benzo(a)pyrene | J | < quantitation limit |
| | indeno(1,2,3-cd)pyrene | J | < quantitation limit |
| | benzo(g,h,i)perylene | J | < quantitation limit |
| <u>Pesticides</u> | | | |
| all samples | endrin aldehyde | R | unacceptable blind spike recovery |

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PURGEABLE ORGANICS DATA REPORT

*** **
** PROJECT NO. 95-0050 SAMPLE NO. 91352 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 001-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
**
** CASE NO.: 22812 SAS NO.: D. NO.: HQ59 **
*** **

UG/KG ANALYTICAL RESULTS
14U CHLOROMETHANE
14U BROMOMETHANE
14U VINYL CHLORIDE
14U CHLOROETHANE
60U METHYLENE CHLORIDE
14U ACETONE
14U CARBON DISULFIDE
14U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
14U 1,1-DICHLOROETHANE
14U 1,2-DICHLOROETHENE (TOTAL)
14U CHLOROFORM
14U 1,2-DICHLOROETHANE
14U METHYL ETHYL KETONE
14U 1,1,1-TRICHLOROETHANE
14U CARBON TETRACHLORIDE
14U BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS
14U 1,2-DICHLOROPROPANE
14U CIS-1,3-DICHLOROPROPENE
14U TRICHLOROETHENE(TRICHLOROETHYLENE)
14U DIBROMOCHLOROMETHANE
14U 1,1,2-TRICHLOROETHANE
14U BENZENE
14U TRANS-1,3-DICHLOROPROPENE
14U BROMOFORM
14U METHYL ISOBUTYL KETONE
14U METHYL BUTYL KETONE
14U TETRACHLOROETHENE(TETRACHLOROETHYLENE)
14U 1,1,2,2-TETRACHLOROETHANE
2J TOLUENE
14U CHLOROBENZENE
14U ETHYL BENZENE
14U STYRENE
14U TOTAL XYLENES
31 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PURGEABLE ORGANICS DATA REPORT

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***
** PROJECT NO. 95-0050  SAMPLE NO. 91353  SAMPLE TYPE: SOIL  PROG ELEM: NSF  COLLECTED BY: F.M. CARNS  **
** SOURCE: SEA GALLEY CLUB  CITY: GOOSE CREE  ST: SC  **
** STATION ID: 002-SS  COLLECTION START: 10/27/94  1115  STOP: 00/00/00  **
** CASE NO.: 22812  SAS NO.:  D. NO.: HQ60  **
***
  
```

UG/KG ANALYTICAL RESULTS

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11U CHLOROMETHANE
11U BROMOMETHANE
11U VINYL CHLORIDE
11U CHLOROETHANE
30U METHYLENE CHLORIDE
16NJ ACETONE
11U CARBON DISULFIDE
11U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
11U 1,1-DICHLOROETHANE
11U 1,2-DICHLOROETHENE (TOTAL)
11U CHLOROFORM
11U 1,2-DICHLOROETHANE
11U METHYL ETHYL KETONE
11U 1,1,1-TRICHLOROETHANE
11U CARBON TETRACHLORIDE
11U BROMODICHLOROMETHANE
  
```

UG/KG ANALYTICAL RESULTS

```

11U 1,2-DICHLOROPROPANE
11U CIS-1,3-DICHLOROPROPENE
11U TRICHLOROETHENE(TRICHLOROETHYLENE)
11U DIBROMOCHLOROMETHANE
11U 1,1,2-TRICHLOROETHANE
11U BENZENE
11U TRANS-1,3-DICHLOROPROPENE
11U BROMOFORM
11U METHYL ISOBUTYL KETONE
11U METHYL BUTYL KETONE
11U TETRACHLOROETHENE(TETRACHLOROETHYLENE)
11U 1,1,2,2-TETRACHLOROETHANE
11U TOLUENE
11U CHLOROBENZENE
11U ETHYL BENZENE
11U STYRENE
11U TOTAL XYLENES
11 PERCENT MOISTURE
  
```

REMARKS

REMARKS

FOOTNOTES

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*A-AVERAGE VALUE    *NA-NOT ANALYZED    *NAI-INTERFERENCES    *J-ESTIMATED VALUE    *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PURGEABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91354 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 003-SS COLLECTION START: 10/27/94 1126 STOP: 00/00/00 **
**
** CASE NO.: 22812 SAS NO.: D. NO.: HQ61 **

| UG/KG | ANALYTICAL RESULTS | UG/KG | ANALYTICAL RESULTS |
|-------|--|-------|--|
| 12U | CHLOROMETHANE | 12U | 1,2-DICHLOROPROPANE |
| 12U | BROMOMETHANE | 12U | CIS-1,3-DICHLOROPROPENE |
| 12U | VINYL CHLORIDE | 12U | TRICHLOROETHENE(TRICHLOROETHYLENE) |
| 12U | CHLOROETHANE | 12U | DIBROMOCHLOROMETHANE |
| 30U | METHYLENE CHLORIDE | 12U | 1,1,2-TRICHLOROETHANE |
| 21NJ | ACETONE | 12U | BENZENE |
| 12U | CARBON DISULFIDE | 12U | TRANS-1,3-DICHLOROPROPENE |
| 12U | 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE) | 12U | BROMOFORM |
| 12U | 1,1-DICHLOROETHANE | 12U | METHYL ISOBUTYL KETONE |
| 12U | 1,2-DICHLOROETHENE (TOTAL) | 12U | METHYL BUTYL KETONE |
| 12U | CHLOROFORM | 12U | TETRACHLOROETHENE(TETRACHLOROETHYLENE) |
| 12U | 1,2-DICHLOROETHANE | 12U | 1,1,2,2-TETRACHLOROETHANE |
| 12U | METHYL ETHYL KETONE | 12U | TOLUENE |
| 12U | 1,1,1-TRICHLOROETHANE | 12U | CHLOROBENZENE |
| 12U | CARBON TETRACHLORIDE | 12U | ETHYL BENZENE |
| 12U | BROMODICHLOROMETHANE | 12U | STYRENE |
| | | 12U | TOTAL XYLENES |
| | | 16 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PURGEABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91355 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 004-SS COLLECTION START: 10/27/94 1138 STOP: 00/00/00 **
**
** CASE NO.: 22812 SAS NO.: D. NO.: HQ62 **

UG/KG ANALYTICAL RESULTS

15U CHLOROMETHANE
15U BROMOMETHANE
15U VINYL CHLORIDE
15U CHLOROETHANE
40U METHYLENE CHLORIDE
15U ACETONE
15U CARBON DISULFIDE
15U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
15U 1,1-DICHLOROETHANE
15U 1,2-DICHLOROETHENE (TOTAL)
15U CHLOROFORM
15U 1,2-DICHLOROETHANE
15U METHYL ETHYL KETONE
15U 1,1,1-TRICHLOROETHANE
15U CARBON TETRACHLORIDE
15U BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS

15U 1,2-DICHLOROPROPANE
15U CIS-1,3-DICHLOROPROPENE
15U TRICHLOROETHENE(TRICHLOROETHYLENE)
15U DIBROMOCHLOROMETHANE
15U 1,1,2-TRICHLOROETHANE
15U BENZENE
15U TRANS-1,3-DICHLOROPROPENE
15U BROMOFORM
15U METHYL ISOBUTYL KETONE
15U METHYL BUTYL KETONE
15U TETRACHLOROETHENE(TETRACHLOROETHYLENE)
15U 1,1,2,2-TETRACHLOROETHANE
15U TOLUENE
15U CHLOROBENZENE
15U ETHYL BENZENE
15U STYRENE
2J TOTAL XYLENES
32 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PURGEABLE ORGANICS DATA REPORT

*** **
** PROJECT NO. 95-0050 SAMPLE NO. 91356 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 005-SD COLLECTION START: 10/27/94 1153 STOP: 00/00/00 **
** CASE NO.: 22812 SAS NO.: D. NO.: HQ63 **
*** **

UG/KG ANALYTICAL RESULTS

16U CHLOROMETHANE
16U BROMOMETHANE
16U VINYL CHLORIDE
16U CHLOROETHANE
40U METHYLENE CHLORIDE
16U ACETONE
16U CARBON DISULFIDE
16U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
16U 1,1-DICHLOROETHANE
16U 1,2-DICHLOROETHENE (TOTAL)
16U CHLOROFORM
16U 1,2-DICHLOROETHANE
16U METHYL ETHYL KETONE
16U 1,1,1-TRICHLOROETHANE
16U CARBON TETRACHLORIDE
16U BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS

16U 1,2-DICHLOROPROPANE
16U CIS-1,3-DICHLOROPROPENE
16U TRICHLOROETHENE(TRICHLOROETHYLENE)
16U DIBROMOCHLOROMETHANE
16U 1,1,2-TRICHLOROETHANE
16U BENZENE
16U TRANS-1,3-DICHLOROPROPENE
16U BROMOFORM
16U METHYL ISOBUTYL KETONE
16U METHYL BUTYL KETONE
16U TETRACHLOROETHENE(TETRACHLOROETHYLENE)
16U 1,1,2,2-TETRACHLOROETHANE
16U TOLUENE
16U CHLOROBENZENE
16U ETHYL BENZENE
16U STYRENE
16U TOTAL XYLENES
36 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PURGEABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91357 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 008-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
**
** CASE NO.: 22812 SAS NO.: D. NO.: HQ64 **

UG/KG ANALYTICAL RESULTS

14U CHLOROMETHANE
14U BROMOMETHANE
14U VINYL CHLORIDE
14U CHLOROETHANE
30U METHYLENE CHLORIDE
14U ACETONE
14U CARBON DISULFIDE
14U 1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
14U 1,1-DICHLOROETHANE
14U 1,2-DICHLOROETHENE (TOTAL)
14U CHLOROFORM
14U 1,2-DICHLOROETHANE
14U METHYL ETHYL KETONE
14U 1,1,1-TRICHLOROETHANE
14U CARBON TETRACHLORIDE
14U BROMODICHLOROMETHANE

UG/KG ANALYTICAL RESULTS

14U 1,2-DICHLOROPROPANE
14U CIS-1,3-DICHLOROPROPENE
14U TRICHLOROETHENE(TRICHLOROETHYLENE)
14U DIBROMOCHLOROMETHANE
14U 1,1,2-TRICHLOROETHANE
14U BENZENE
14U TRANS-1,3-DICHLOROPROPENE
14U BROMOFORM
14U METHYL ISOBUTYL KETONE
14U METHYL BUTYL KETONE
14U TETRACHLOROETHENE(TETRACHLOROETHYLENE)
14U 1,1,2,2-TETRACHLOROETHANE
14U TOLUENE
14U CHLOROBENZENE
14U ETHYL BENZENE
14U STYRENE
14U TOTAL XYLENES
29 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

TOTO2\$DISK:[ESAT]PROEXTMISC.LST;1

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91352 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 001-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ59 MD NO: HQ59 **
**

ANALYTICAL RESULTS UG/KG

90J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91353 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 002-SS COLLECTION START: 10/27/94 1115 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ60 MD NO: HQ60 **

ANALYTICAL RESULTS UG/KG

20J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91354 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 003-SS COLLECTION START: 10/27/94 1126 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ61 MD NO: HQ61 **

ANALYTICAL RESULTS UG/KG

30J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM*****

DATE: 12/13/94

SUBJECT: Results of Extractable Organic Analysis;
95-0050 SEA GALLEY CLUB
GOOSE CREE SC
CASE NO: 22812

FROM: Charles H. Hooper
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOHN CRISWELL

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

ORGANIC DATA QUALIFIER REPORT

Case Number 22812 Project Number 95-0050 SAS Number
 Site ID. Sea Galley Club, Goose Cree, SC

| <u>Affected Samples</u> | <u>Compound or Fraction</u> | <u>Flag Used</u> | <u>Reason</u> |
|-------------------------|-----------------------------|----------------------|---|
| <u>Volatiles</u> | | | |
| 91352 | toluene | J | < quantitation limit |
| 91353,91354 | acetone | J N | erratic response factor common lab contaminant |
| 91355 | xylene | J | < quantitation limit |
| <u>Extractables</u> | | | |
| all samples | 2,4,6-trichlorophenol | J | low blind spike recovery |
| | fluorene | J | low blind spike recovery |
| 91355 | phenanthrene | J | < quantitation limit |
| | fluoranthene | J | < quantitation limit |
| | pyrene | J | < quantitation limit |
| | chrysene | J | < quantitation limit |
| | benzo(b/k)fluoranthene | J | < quantitation limit |
| | benzo(a)pyrene | J | < quantitation limit |
| | indeno(1,2,3-cd)pyrene | J | < quantitation limit |
| <u>Pesticides</u> | | | |
| all samples | endrin aldehyde | R | unacceptable blind spike recovery |

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91352 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 001-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
**
** CASE NO.: 22812 SAS NO.: D. NO.: HQ59 **

UG/KG ANALYTICAL RESULTS

470U PHENOL
470U BIS(2-CHLOROETHYL) ETHER
470U 2-CHLOROPHENOL
470U 1,3-DICHLOROBENZENE
470U 1,4-DICHLOROBENZENE
470U 1,2-DICHLOROBENZENE
470U 2-METHYLPHENOL
470U 2,2'-CHLOROISOPROPYLETH
470U (3-AND/OR 4-)METHYLPHENOL
470U N-NITROSODI-N-PROPYLAMINE
470U HEXACHLOROETHANE
470U NITROBENZENE
470U ISOPHORONE
470U 2-NITROPHENOL
470U 2,4-DIMETHYLPHENOL
470U BIS(2-CHLOROETHOXY) METHANE
470U 2,4-DICHLOROPHENOL
470U 1,2,4-TRICHLOROBENZENE
470U NAPHTHALENE
470U 4-CHLOROANILINE
470U HEXACHLOROBUTADIENE
470U 4-CHLORO-3-METHYLPHENOL
470U 2-METHYLNAPHTHALENE
470U HEXACHLOROCYCLOPENTADIENE (HCCP)
470UJ 2,4,6-TRICHLOROPHENOL
1200U 2,4,5-TRICHLOROPHENOL
470U 2-CHLORONAPHTHALENE
1200U 2-NITROANILINE
470U DIMETHYL PHTHALATE
470U ACENAPHTHYLENE
470U 2,6-DINITROTOLUENE

UG/KG ANALYTICAL RESULTS

1200U 3-NITROANILINE
470U ACENAPHTHENE
1200U 2,4-DINITROPHENOL
1200U 4-NITROPHENOL
470U DIBENZOFURAN
470U 2,4-DINITROTOLUENE
470U DIETHYL PHTHALATE
470U 4-CHLOROPHENYL PHENYL ETHER
470UJ FLUORENE
1200U 4-NITROANILINE
1200U 2-METHYL-4,6-DINITROPHENOL
470U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
470U 4-BROMOPHENYL PHENYL ETHER
470U HEXACHLOROBENZENE (HCB)
1200U PENTACHLOROPHENOL
470U PHENANTHRENE
470U ANTHRACENE
470U CARBAZOLE
470U DI-N-BUTYLPHTHALATE
470U FLUORANTHENE
470U PYRENE
470U BENZYL BUTYL PHTHALATE
470U 3,3'-DICHLOROBENZIDINE
470U BENZO(A)ANTHRACENE
470U CHRYSENE
470U BIS(2-ETHYLHEXYL) PHTHALATE
470U DI-N-OCTYLPHTHALATE
470U BENZO(B AND/OR K)FLUORANTHENE
470U BENZO-A-PYRENE
470U INDENO (1,2,3-CD) PYRENE
470U DIBENZO(A,H)ANTHRACENE
470U BENZO(GH)PERYLENE
31 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

EXTRACTABLE ORGANICS DATA REPORT

*** **

** PROJECT NO. 95-0050 SAMPLE NO. 91353 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **

** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **

** STATION ID: 002-SS COLLECTION START: 10/27/94 1115 STOP: 00/00/00 **

** **

** CASE NO.: 22812 SAS NO.: D. NO.: HQ60 **

*** **

UG/KG ANALYTICAL RESULTS

370U PHENOL

370U BIS(2-CHLOROETHYL) ETHER

370U 2-CHLOROPHENOL

370U 1,3-DICHLOROBENZENE

370U 1,4-DICHLOROBENZENE

370U 1,2-DICHLOROBENZENE

370U 2-METHYLPHENOL

370U 2,2'-CHLOROISOPROPYLETHER

370U (3-AND/OR 4-)METHYLPHENOL

370U N-NITROSODI-N-PROPYLAMINE

370U HEXACHLOROETHANE

370U NITROBENZENE

370U ISOPHORONE

370U 2-NITROPHENOL

370U 2,4-DIMETHYLPHENOL

370U BIS(2-CHLOROETHOXY) METHANE

370U 2,4-DICHLOROPHENOL

370U 1,2,4-TRICHLOROBENZENE

370U NAPHTHALENE

370U 4-CHLOROANILINE

370U HEXACHLOROBUTADIENE

370U 4-CHLORO-3-METHYLPHENOL

370U 2-METHYLNAPHTHALENE

370U HEXACHLOROCYCLOPENTADIENE (HCCP)

370UJ 2,4,6-TRICHLOROPHENOL

930U 2,4,5-TRICHLOROPHENOL

370U 2-CHLORONAPHTHALENE

930U 2-NITROANILINE

370U DIMETHYL PHTHALATE

370U ACENAPHTHYLENE

370U 2,6-DINITROTOLUENE

UG/KG ANALYTICAL RESULTS

930U 3-NITROANILINE

370U ACENAPHTHENE

930U 2,4-DINITROPHENOL

930U 4-NITROPHENOL

370U DIBENZOFURAN

370U 2,4-DINITROTOLUENE

370U DIETHYL PHTHALATE

370U 4-CHLOROPHENYL PHENYL ETHER

370UJ FLUORENE

930U 4-NITROANILINE

930U 2-METHYL-4,6-DINITROPHENOL

370U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE

370U 4-BROMOPHENYL PHENYL ETHER

370U HEXACHLOROBENZENE (HCB)

930U PENTACHLOROPHENOL

370U PHENANTHRENE

370U ANTHRACENE

370U CARBAZOLE

370U DI-N-BUTYLPHTHALATE

370U FLUORANTHENE

370U PYRENE

370U BENZYL BUTYL PHTHALATE

370U 3,3'-DICHLOROBENZIDINE

370U BENZO(A)ANTHRACENE

370U CHRYSENE

370U BIS(2-ETHYLHEXYL) PHTHALATE

370U DI-N-OCTYLPHTHALATE

370U BENZO(B AND/OR K)FLUORANTHENE

370U BENZO-A-PYRENE

370U INDENO (1,2,3-CD) PYRENE

370U DIBENZO(A,H)ANTHRACENE

370U BENZO(GHI)PERYLENE

11 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91354 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 003-SS COLLECTION START: 10/27/94 1126 STOP: 00/00/00 **
**

*** CASE NO.: 22812 SAS NO.: D. NO.: HQ61 ***

UG/KG ANALYTICAL RESULTS

380U PHENOL
380U BIS(2-CHLOROETHYL) ETHER
380U 2-CHLOROPHENOL
380U 1,3-DICHLOROBENZENE
380U 1,4-DICHLOROBENZENE
380U 1,2-DICHLOROBENZENE
380U 2-METHYLPHENOL
380U 2,2'-CHLOROISOPROPYLETHER
380U (3-AND/OR 4-)METHYLPHENOL
380U N-NITROSODI-N-PROPYLAMINE
380U HEXACHLOROETHANE
380U NITROBENZENE
380U ISOPHORONE
380U 2-NITROPHENOL
380U 2,4-DIMETHYLPHENOL
380U BIS(2-CHLOROETHOXY) METHANE
380U 2,4-DICHLOROPHENOL
380U 1,2,4-TRICHLOROBENZENE
380U NAPHTHALENE
380U 4-CHLOROANILINE
380U HEXACHLOROBUTADIENE
380U 4-CHLORO-3-METHYLPHENOL
380U 2-METHYLNAPHTHALENE
380U HEXACHLOROCYCLOPENTADIENE (HCCP)
380UJ 2,4,6-TRICHLOROPHENOL
970U 2,4,5-TRICHLOROPHENOL
380U 2-CHLORONAPHTHALENE
970U 2-NITROANILINE
380U DIMETHYL PHTHALATE
380U ACENAPHTHYLENE
380U 2,6-DINITROTOLUENE

UG/KG ANALYTICAL RESULTS

970U 3-NITROANILINE
380U ACENAPHTHENE
970U 2,4-DINITROPHENOL
970U 4-NITROPHENOL
380U DIBENZOFURAN
380U 2,4-DINITROTOLUENE
380U DIETHYL PHTHALATE
380U 4-CHLOROPHENYL PHENYL ETHER
380UJ FLUORENE
970U 4-NITROANILINE
970U 2-METHYL-4,6-DINITROPHENOL
380U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
380U 4-BROMOPHENYL PHENYL ETHER
380U HEXACHLOROBENZENE (HCB)
970U PENTACHLOROPHENOL
380U PHENANTHRENE
380U ANTHRACENE
380U CARBAZOLE
380U DI-N-BUTYLPHTHALATE
380U FLUORANTHENE
380U PYRENE
380U BENZYL BUTYL PHTHALATE
380U 3,3'-DICHLOROBENZIDINE
380U BENZO(A)ANTHRACENE
380U CHRYSENE
380U BIS(2-ETHYLHEXYL) PHTHALATE
380U DI-N-OCTYLPHTHALATE
380U BENZO(B AND/OR K)FLUORANTHENE
380U BENZO-A-PYRENE
380U INDENO (1,2,3-CD) PYRENE
380U DIBENZO(A,H)ANTHRACENE
380U BENZO(GHI)PERYLENE
16 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91355 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 004-SS COLLECTION START: 10/27/94 1138 STOP: 00/00/00 **
**

*** CASE NO.: 22812 SAS NO.: D. NO.: HQ62 ***

| UG/KG | ANALYTICAL RESULTS | UG/KG | ANALYTICAL RESULTS |
|-------|----------------------------------|-------|--------------------------------------|
| 480U | PHENOL | 1200U | 3-NITROANILINE |
| 480U | BIS(2-CHLOROETHYL) ETHER | 480U | ACENAPHTHENE |
| 480U | 2-CHLOROPHENOL | 1200U | 2,4-DINITROPHENOL |
| 480U | 1,3-DICHLOROBENZENE | 1200U | 4-NITROPHENOL |
| 480U | 1,4-DICHLOROBENZENE | 480U | DIBENZOFURAN |
| 480U | 1,2-DICHLOROBENZENE | 480U | 2,4-DINITROTOLUENE |
| 480U | 2-METHYLPHENOL | 480U | DIETHYL PHTHALATE |
| 480U | 2,2'-CHLOROISOPROPYLETHER | 480U | 4-CHLOROPHENYL PHENYL ETHER |
| 480U | (3-AND/OR 4-)METHYLPHENOL | 480UJ | FLUORENE |
| 480U | N-NITROSODI-N-PROPYLAMINE | 1200U | 4-NITROANILINE |
| 480U | HEXACHLOROETHANE | 1200U | 2-METHYL-4,6-DINITROPHENOL |
| 480U | NITROBENZENE | 480U | N-NITROSODIPHENYLAMINE/DIPHENYLAMINE |
| 480U | ISOPHORONE | 480U | 4-BROMOPHENYL PHENYL ETHER |
| 480U | 2-NITROPHENOL | 480U | HEXACHLOROBENZENE (HCB) |
| 480U | 2,4-DIMETHYLPHENOL | 1200U | PENTACHLOROPHENOL |
| 480U | BIS(2-CHLOROETHOXY) METHANE | 50J | PHENANTHRENE |
| 480U | 2,4-DICHLOROPHENOL | 480U | ANTHRACENE |
| 480U | 1,2,4-TRICHLOROBENZENE | 480U | CARBAZOLE |
| 480U | NAPHTHALENE | 480U | DI-N-BUTYLPHTHALATE |
| 480U | 4-CHLOROANILINE | 250J | FLUORANTHENE |
| 480U | HEXACHLOROBUTADIENE | 270J | PYRENE |
| 480U | 4-CHLORO-3-METHYLPHENOL | 480U | BENZYL BUTYL PHTHALATE |
| 480U | 2-METHYLNAPHTHALENE | 480U | 3,3'-DICHLOROBENZIDINE |
| 480U | HEXACHLOROCYCLOPENTADIENE (HCCP) | 480U | BENZO(A)ANTHRACENE |
| 480UJ | 2,4,6-TRICHLOROPHENOL | 190J | CHRYSENE |
| 1200U | 2,4,5-TRICHLOROPHENOL | 480U | BIS(2-ETHYLHEXYL) PHTHALATE |
| 480U | 2-CHLORONAPHTHALENE | 480U | DI-N-OCTYLPHTHALATE |
| 1200U | 2-NITROANILINE | 390J | BENZO(B AND/OR K)FLUORANTHENE |
| 480U | DIMETHYL PHTHALATE | 94J | BENZO-A-PYRENE |
| 480U | ACENAPHTHYLENE | 130J | INDENO (1,2,3-CD) PYRENE |
| 480U | 2,6-DINITROTOLUENE | 480U | DIBENZO(A,H)ANTHRACENE |
| | | 130J | BENZO(GHI)PERYLENE |
| | | 32 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91356 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 005-SD COLLECTION START: 10/27/94 1153 STOP: 00/00/00 **
**
** CASE NO.: 22812 SAS NO.: D. NO.: HQ63 **
*** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **

UG/KG ANALYTICAL RESULTS

510U PHENOL
510U BIS(2-CHLOROETHYL) ETHER
510U 2-CHLOROPHENOL
510U 1,3-DICHLOROBENZENE
510U 1,4-DICHLOROBENZENE
510U 1,2-DICHLOROBENZENE
510U 2-METHYLPHENOL
510U 2,2'-CHLOROISOPROPYLETHER
510U (3-AND/OR 4-)METHYLPHENOL
510U N-NITROSODI-N-PROPYLAMINE
510U HEXACHLOROETHANE
510U NITROBENZENE
510U ISOPHORONE
510U 2-NITROPHENOL
510U 2,4-DIMETHYLPHENOL
510U BIS(2-CHLOROETHOXY) METHANE
510U 2,4-DICHLOROPHENOL
510U 1,2,4-TRICHLOROBENZENE
510U NAPHTHALENE
510U 4-CHLOROANILINE
510U HEXACHLOROBUTADIENE
510U 4-CHLORO-3-METHYLPHENOL
510U 2-METHYLNAPHTHALENE
510U HEXACHLOROCYCLOPENTADIENE (HCCP)
510UJ 2,4,6-TRICHLOROPHENOL
1300U 2,4,5-TRICHLOROPHENOL
510U 2-CHLORONAPHTHALENE
1300U 2-NITROANILINE
510U DIMETHYL PHTHALATE
510U ACENAPHTHYLENE
510U 2,6-DINITROTOLUENE

UG/KG ANALYTICAL RESULTS

1300U 3-NITROANILINE
510U ACENAPHTHENE
1300U 2,4-DINITROPHENOL
1300U 4-NITROPHENOL
510U DIBENZOFURAN
510U 2,4-DINITROTOLUENE
510U DIETHYL PHTHALATE
510U 4-CHLOROPHENYL PHENYL ETHER
510UJ FLUORENE
1300U 4-NITROANILINE
1300U 2-METHYL-4,6-DINITROPHENOL
510U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
510U 4-BROMOPHENYL PHENYL ETHER
510U HEXACHLOROBENZENE (HCB)
1300U PENTACHLOROPHENOL
510U PHENANTHRENE
510U ANTHRACENE
510U CARBAZOLE
510U DI-N-BUTYLPHTHALATE
510U FLUORANTHENE
510U PYRENE
510U BENZYL BUTYL PHTHALATE
510U 3,3'-DICHLOROBENZIDINE
510U BENZO(A)ANTHRACENE
510U CHRYSENE
510U BIS(2-ETHYLHEXYL) PHTHALATE
510U DI-N-OCTYLPHTHALATE
510U BENZO(B AND/OR K)FLUORANTHENE
510U BENZO-A-PYRENE
510U INDENO (1,2,3-CD) PYRENE
510U DIBENZO(A,H)ANTHRACENE
510U BENZO(GH)PERYLENE
36 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91357 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 008-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
**
** CASE NO.: 22812 SAS NO.: D. NO.: HQ64 **

UG/KG ANALYTICAL RESULTS

450U PHENOL
450U BIS(2-CHLOROETHYL) ETHER
450U 2-CHLOROPHENOL
450U 1,3-DICHLOROBENZENE
450U 1,4-DICHLOROBENZENE
450U 1,2-DICHLOROBENZENE
450U 2-METHYLPHENOL
450U 2,2'-CHLOROISOPROPYLETH
450U (3-AND/OR 4-)METHYLPHENOL
450U N-NITROSODI-N-PROPYLAMINE
450U HEXACHLOROETHANE
450U NITROBENZENE
450U ISOPHORONE
450U 2-NITROPHENOL
450U 2,4-DIMETHYLPHENOL
450U BIS(2-CHLOROETHOXY) METHANE
450U 2,4-DICHLOROPHENOL
450U 1,2,4-TRICHLOROBENZENE
450U NAPHTHALENE
450U 4-CHLOROANILINE
450U HEXACHLOROBUTADIENE
450U 4-CHLORO-3-METHYLPHENOL
450U 2-METHYLNAPHTHALENE
450U HEXACHLOROCYCLOPENTADIENE (HCCP)
450UJ 2,4,6-TRICHLOROPHENOL
1100U 2,4,5-TRICHLOROPHENOL
450U 2-CHLORONAPHTHALENE
1100U 2-NITROANILINE
450U DIMETHYL PHTHALATE
450U ACENAPHTHYLENE
450U 2,6-DINITROTOLUENE

UG/KG ANALYTICAL RESULTS

1100U 3-NITROANILINE
450U ACENAPHTHENE
1100U 2,4-DINITROPHENOL
1100U 4-NITROPHENOL
450U DIBENZOFURAN
450U 2,4-DINITROTOLUENE
450U DIETHYL PHTHALATE
450U 4-CHLOROPHENYL PHENYL ETHER
450UJ FLUORENE
1100U 4-NITROANILINE
1100U 2-METHYL-4,6-DINITROPHENOL
450U N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
450U 4-BROMOPHENYL PHENYL ETHER
450U HEXACHLOROBENZENE (HCB)
1100U PENTACHLOROPHENOL
450U PHENANTHRENE
450U ANTHRACENE
450U CARBAZOLE
450U DI-N-BUTYLPHTHALATE
450U FLUORANTHENE
450U PYRENE
450U BENZYL BUTYL PHTHALATE
450U 3,3'-DICHLOROBENZIDINE
450U BENZO(A)ANTHRACENE
450U CHRYSENE
450U BIS(2-ETHYLHEXYL) PHTHALATE
450U DI-N-OCTYLPHTHALATE
450U BENZO(B AND/OR K)FLUORANTHENE
450U BENZO-A-PYRENE
450U INDENO (1,2,3-CD) PYRENE
450U DIBENZO(A,H)ANTHRACENE
450U BENZO(GH)PERYLENE
29 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

TOTO2\$DISK:[ESAT]PRODCMET.LST;1

TOTO2\$DISK:[ESAT]PRODCPCB.LST;1

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91352 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 001-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ59 MD NO: HQ59 **
**

ANALYTICAL RESULTS UG/KG

8000J 3 UNIDENTIFIED COMPOUNDS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91353 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 002-SS COLLECTION START: 10/27/94 1115 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ60 MD NO: HQ60 **
**

ANALYTICAL RESULTS UG/KG

500J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91354 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 003-SS COLLECTION START: 10/27/94 1126 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ61 MD NO: HQ61 **

ANALYTICAL RESULTS UG/KG

2000J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91355 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 004-SS COLLECTION START: 10/27/94 1138 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ62 MD NO: HQ62 **
**

ANALYTICAL RESULTS UG/KG

500J 1 UNIDENTIFIED COMPOUND

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91356 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 005-SD COLLECTION START: 10/27/94 1153 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ63 MD NO: HQ63 **
**

ANALYTICAL RESULTS UG/KG

2000J 3 UNIDENTIFIED COMPOUNDS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91357 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 008-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ64 MD NO: HQ64 **
**

ANALYTICAL RESULTS UG/KG

6000J 2 UNIDENTIFIED COMPOUNDS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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TOT02\$DISK:[ESAT]PRODCBMISC.LST;1

TOTC2\$DISK:[ESAT]PRODSPECIFY.LST;1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM*****

DATE: 12/13/94

SUBJECT: Results of Pesticide/PCB Analysis;
95-0050 SEA GALLEY CLUB
GOOSE CREE SC
CASE NO: 22812

FROM: Charles H. Hooper
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOHN CRISWELL

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

ORGANIC DATA QUALIFIER REPORT

Case Number 22812 Project Number 95-0050 SAS Number
Site ID. Sea Galley Club, Goose Cree, SC

| <u>Affected Samples</u> | <u>Compound or Fraction</u> | <u>Flag Used</u> | <u>Reason</u> |
|-------------------------|-----------------------------|----------------------|---|
| <u>Volatiles</u> | | | |
| 91352 | toluene | J | < quantitation limit |
| 91353, 91354 | acetone | J N | erratic response factor common lab contaminant |
| 91355 | xylene | J | < quantitation limit |
| <u>Extractables</u> | | | |
| all samples | 2,4,6-trichlorophenol | J | low blind spike recovery |
| | fluorene | J | low blind spike recovery |
| 91355 | phenanthrene | J | < quantitation limit |
| | fluoranthene | J | < quantitation limit |
| | pyrene | J | < quantitation limit |
| | chrysene | J | < quantitation limit |
| | benzo(b/k)fluoranthene | J | < quantitation limit |
| | benzo(a)pyrene | J | < quantitation limit |
| | indeno(1,2,3-cd)pyrene | J | < quantitation limit |
| | benzo(g,h,i)perylene | J | < quantitation limit |
| <u>Pesticides</u> | | | |
| all samples | endrin aldehyde | R | unacceptable blind spike recovery |

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PESTICIDES/PCB'S DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91352 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 001-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: D. NUMBER: HQ59 **
**

| UG/KG | ANALYTICAL RESULTS | UG/KG | ANALYTICAL RESULTS |
|-------|----------------------|-------|------------------------------|
| 2.4U | ALPHA-BHC | 24U | METHOXYCHLOR |
| 2.4U | BETA-BHC | 4.8U | ENDRIN KETONE |
| 2.4U | DELTA-BHC | 4.8UR | ENDRIN ALDEHYDE |
| 2.4U | GAMMA-BHC (LINDANE) | -- | CHLORDANE (TECH. MIXTURE) /1 |
| 2.4U | HEPTACHLOR | 2.4U | GAMMA-CHLORDANE /2 |
| 2.4U | ALDRIN | 2.4U | ALPHA-CHLORDANE /2 |
| 2.4U | HEPTACHLOR EPOXIDE | 240U | TOXAPHENE |
| 2.4U | ENDOSULFAN I (ALPHA) | 48U | PCB-1016 (AROCLOR 1016) |
| 4.8U | DIELDRIN | 96U | PCB-1221 (AROCLOR 1221) |
| 4.8U | 4,4'-DDE (P,P'-DDE) | 48U | PCB-1232 (AROCLOR 1232) |
| 4.8U | ENDRIN | 48U | PCB-1242 (AROCLOR 1242) |
| 4.8U | ENDOSULFAN II (BETA) | 48U | PCB-1248 (AROCLOR 1248) |
| 4.8U | 4,4'-DDD (P,P'-DDD) | 48U | PCB-1254 (AROCLOR 1254) |
| 4.8U | ENDOSULFAN SULFATE | 48U | PCB-1260 (AROCLOR 1260) |
| 4.8U | 4,4'-DDT (P,P'-DDT) | 31 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PESTICIDES/PCB'S DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91353 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 002-SS COLLECTION START: 10/27/94 1115 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: D. NUMBER: HQ60 **
**

UG/KG ANALYTICAL RESULTS

1.8U ALPHA-BHC
1.8U BETA-BHC
1.8U DELTA-BHC
1.8U GAMMA-BHC (LINDANE)
1.8U HEPTACHLOR
1.8U ALDRIN
1.8U HEPTACHLOR EPOXIDE
1.8U ENDOSULFAN I (ALPHA)
3.6U DIELDRIN
3.6U 4,4'-DDE (P,P'-DDE)
3.6U ENDRIN
3.6U ENDOSULFAN II (BETA)
3.6U 4,4'-DDD (P,P'-DDD)
3.6U ENDOSULFAN SULFATE
3.6U 4,4'-DDT (P,P'-DDT)

UG/KG ANALYTICAL RESULTS

18U METHOXYCHLOR
3.6U ENDRIN KETONE
3.6UR ENDRIN ALDEHYDE
-- CHLORDANE (TECH. MIXTURE) /1
1.8U GAMMA-CHLORDANE /2
1.8U ALPHA-CHLORDANE /2
180U TOXAPHENE
36U PCB-1016 (AROCOR 1016)
72U PCB-1221 (AROCOR 1221)
36U PCB-1232 (AROCOR 1232)
36U PCB-1242 (AROCOR 1242)
36U PCB-1248 (AROCOR 1248)
36U PCB-1254 (AROCOR 1254)
36U PCB-1260 (AROCOR 1260)
11 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PESTICIDES/PCB'S DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91354 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 003-SS COLLECTION START: 10/27/94 1126 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: D. NUMBER: HQ61 **
**

| UG/KG | ANALYTICAL RESULTS | UG/KG | ANALYTICAL RESULTS |
|-------|----------------------|-------|------------------------------|
| 1.9U | ALPHA-BHC | 19U | METHOXYCHLOR |
| 1.9U | BETA-BHC | 3.9U | ENDRIN KETONE |
| 1.9U | DELTA-BHC | 3.9UR | ENDRIN ALDEHYDE |
| 1.9U | GAMMA-BHC (LINDANE) | -- | CHLORDANE (TECH. MIXTURE) /1 |
| 1.9U | HEPTACHLOR | 1.9U | GAMMA-CHLORDANE /2 |
| 1.9U | ALDRIN | 1.9U | ALPHA-CHLORDANE /2 |
| 1.9U | HEPTACHLOR EPOXIDE | 190U | TOXAPHENE |
| 1.9U | ENDOSULFAN I (ALPHA) | 39U | PCB-1016 (AROCLOR 1016) |
| 3.9U | DIELDRIN | 78U | PCB-1221 (AROCLOR 1221) |
| 3.9U | 4,4'-DDE (P,P'-DDE) | 39U | PCB-1232 (AROCLOR 1232) |
| 3.9U | ENDRIN | 39U | PCB-1242 (AROCLOR 1242) |
| 3.9U | ENDOSULFAN II (BETA) | 39U | PCB-1248 (AROCLOR 1248) |
| 3.9U | 4,4'-DDD (P,P'-DDD) | 39U | PCB-1254 (AROCLOR 1254) |
| 3.9U | ENDOSULFAN SULFATE | 39U | PCB-1260 (AROCLOR 1260) |
| 3.9U | 4,4'-DDT (P,P'-DDT) | 16 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

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2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PESTICIDES/PCB'S DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91355 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 004-SS COLLECTION START: 10/27/94 1138 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: D. NUMBER: HQ62 **
**

| UG/KG | ANALYTICAL RESULTS | UG/KG | ANALYTICAL RESULTS |
|-------|----------------------|-------|------------------------------|
| 2.4U | ALPHA-BHC | 24U | METHOXYCHLOR |
| 2.4U | BETA-BHC | 4.8U | ENDRIN KETONE |
| 2.4U | DELTA-BHC | 4.8UR | ENDRIN ALDEHYDE |
| 2.4U | GAMMA-BHC (LINDANE) | -- | CHLORDANE (TECH. MIXTURE) /1 |
| 2.4U | HEPTACHLOR | 2.4U | GAMMA-CHLORDANE /2 |
| 2.4U | ALDRIN | 2.4U | ALPHA-CHLORDANE /2 |
| 2.4U | HEPTACHLOR EPOXIDE | 240U | TOXAPHENE |
| 2.4U | ENDOSULFAN I (ALPHA) | 48U | PCB-1016 (AROCLOR 1016) |
| 4.8U | DIELDRIN | 96U | PCB-1221 (AROCLOR 1221) |
| 4.8U | 4,4'-DDE (P,P'-DDE) | 48U | PCB-1232 (AROCLOR 1232) |
| 4.8U | ENDRIN | 48U | PCB-1242 (AROCLOR 1242) |
| 6.0U | ENDOSULFAN II (BETA) | 48U | PCB-1248 (AROCLOR 1248) |
| 4.8U | 4,4'-DDD (P,P'-DDD) | 48U | PCB-1254 (AROCLOR 1254) |
| 4.8U | ENDOSULFAN SULFATE | 48U | PCB-1260 (AROCLOR 1260) |
| 4.8U | 4,4'-DDT (P,P'-DDT) | 32 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PESTICIDES/PCB'S DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91356 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 005-SD COLLECTION START: 10/27/94 1153 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: D. NUMBER: HQ63 **
**

| UG/KG | ANALYTICAL RESULTS | UG/KG | ANALYTICAL RESULTS |
|-------|----------------------|-------|------------------------------|
| 2.6U | ALPHA-BHC | 26U | METHOXYCHLOR |
| 2.6U | BETA-BHC | 5.2U | ENDRIN KETONE |
| 2.6U | DELTA-BHC | 5.2UR | ENDRIN ALDEHYDE |
| 2.6U | GAMMA-BHC (LINDANE) | -- | CHLORDANE (TECH. MIXTURE) /1 |
| 2.6U | HEPTACHLOR | 2.6U | GAMMA-CHLORDANE /2 |
| 2.6U | ALDRIN | 2.6U | ALPHA-CHLORDANE /2 |
| 2.6U | HEPTACHLOR EPOXIDE | 260U | TOXAPHENE |
| 2.6U | ENDOSULFAN I (ALPHA) | 52U | PCB-1016 (AROCLOR 1016) |
| 5.2U | DIELDRIN | 100U | PCB-1221 (AROCLOR 1221) |
| 5.2U | 4,4'-DDE (P,P'-DDE) | 52U | PCB-1232 (AROCLOR 1232) |
| 5.2U | ENDRIN | 52U | PCB-1242 (AROCLOR 1242) |
| 5.2U | ENDOSULFAN II (BETA) | 52U | PCB-1248 (AROCLOR 1248) |
| 5.2U | 4,4'-DDD (P,P'-DDD) | 52U | PCB-1254 (AROCLOR 1254) |
| 5.2U | ENDOSULFAN SULFATE | 52U | PCB-1260 (AROCLOR 1260) |
| 5.2U | 4,4'-DDT (P,P'-DDT) | 36 | PERCENT MOISTURE |

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/12/94

PESTICIDES/PCB'S DATA REPORT

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*** **
** PROJECT NO. 95-0050 SAMPLE NO. 91357 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 008-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: D. NUMBER: HQ64 **
**

```

UG/KG ANALYTICAL RESULTS

2.3U ALPHA-BHC
2.3U BETA-BHC
2.3U DELTA-BHC
2.3U GAMMA-BHC (LINDANE)
2.3U HEPTACHLOR
2.3U ALDRIN
2.3U HEPTACHLOR EPOXIDE
2.3U ENDOSULFAN I (ALPHA)
4.6U DIELDRIN
4.6U 4,4'-DDE (P,P'-DDE)
4.6U ENDRIN
4.6U ENDOSULFAN II (BETA)
4.6U 4,4'-DDD (P,P'-DDD)
4.6U ENDOSULFAN SULFATE
4.6U 4,4'-DDT (P,P'-DDT)

UG/KG ANALYTICAL RESULTS

23U METHOXYCHLOR
4.6U ENDRIN KETONE
4.6UR ENDRIN ALDEHYDE
-- CHLORDANE (TECH. MIXTURE) /1
2.3U GAMMA-CHLORDANE /2
2.3U ALPHA-CHLORDANE /2
230U TOXAPHENE
46U PCB-1016 (AROCLOR 1016)
92U PCB-1221 (AROCLOR 1221)
46U PCB-1232 (AROCLOR 1232)
46U PCB-1242 (AROCLOR 1242)
46U PCB-1248 (AROCLOR 1248)
46U PCB-1254 (AROCLOR 1254)
46U PCB-1260 (AROCLOR 1260)
29 PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
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*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

TOTO2\$DISK:[ESAT]PRODCVOA.LST;1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM*****

DATE: 12/08/94

SUBJECT: Results of Metals Analysis;
95-0050 SEA GALLEY CLUB
GOOSE CREE SC
CASE NO: 22812

FROM: Charles H. Hooper
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOHN CRISWELL

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

INORGANIC DATA QUALIFIERS REPORT

Case Number: 22812
 Project Number: 95-0050
 Site: Sea Galley Club, Goose Creek, SC

| Element | Flag | Samples Affected | Reason |
|--------------------------|------|---|---|
| all samples | | | |
| As, Se, Zn | U | All positives >IDL but <CRDL | baseline instability |
| Al, Ca, Fe, Mn, Na, K, V | U | all positives >IDL but <10X blank contamination | postivities in blanks |
| Pb | J | All results with Fe or Al concentration in solution >86000ug/L | Suspected negative interference as noted in the contractor ICS |
| Tl | JN | All positives with Al or Fe concentrations in solution >88000ug/L | Suspected positive interference as noted in the contractor ICS |
| Ni | J | MDHQ59, 60, 63 | %RSD >20% for ICP multiple exposure |
| Co | J | MDHQ63, 64 | %RSD >20% for ICP multiple exposure |
| Cd | U | MDHQ62 | %RSD >20% for ICP multiple exposure and result >IDL but <CRDL |
| Be | J | MDHQ59, 60, 61, 62, 63, 64 | %RSD <20% for ICP multiple exposure and result >IDL but <CRDL |
| Cd | J | MDHQ61 | result >IDL but <CRDL and %RSD <20% for ICP multiple exposure |
| Be | J | MDHQ59, 60, 61, 62, 63, 64 | Only 2X CRDL standard analysis required by SOW for ICP analysis |
| Cd | J | MDHQ61 | only 2X CRDL standard analysis required by SOW for ICP analysis |
| Sb | J | all soils | matrix spike recovery 41.4% |
| Al | J | all soils | matrix duplicate RPD 38.6% |
| Mn | J | all soils | matrix duplicate RPD 76.9% |
| Pb | J | all negative soils | recovery of CRA standard only 5% |

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

METALS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91352 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 001-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: MD NUMBER: HQ59 **
**

| MG/KG | ANALYTICAL RESULTS | MG/KG | ANALYTICAL RESULTS |
|-------|--------------------|--------|--------------------|
| 6300J | ALUMINUM | 7.3J | MANGANESE |
| 3.6UJ | ANTIMONY | 0.15UJ | MERCURY |
| 2.0U | ARSENIC | 2.2J | NICKEL |
| 19 | BARIUM | 180U | POTASSIUM |
| 0.06J | BERYLLIUM | 0.8U | SELENIUM |
| 0.44U | CADMIUM | 0.58U | SILVER |
| 660 | CALCIUM | 39 | SODIUM |
| 5.7 | CHROMIUM | 1.2U | THALLIUM |
| 0.86 | COBALT | NA | TIN |
| 1.9 | COPPER | 13 | VANADIUM |
| 3900 | IRON | 6.1 | ZINC |
| 17 | LEAD | 32 | PERCENT MOISTURE |
| 150 | MAGNESIUM | | |

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

METALS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91353 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 002-SS COLLECTION START: 10/27/94 1115 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: MD NUMBER: HQ60 **
**

| MG/KG | ANALYTICAL RESULTS | MG/KG | ANALYTICAL RESULTS |
|-------|--------------------|--------|--------------------|
| 4800J | ALUMINUM | 16J | MANGANESE |
| 2.7UJ | ANTIMONY | 0.11UJ | MERCURY |
| 2.0U | ARSENIC | 1.9J | NICKEL |
| 13 | BARIUM | 90U | POTASSIUM |
| 0.05J | BERYLLIUM | 0.60U | SELENIUM |
| 0.33U | CADMIUM | 0.44U | SILVER |
| 610 | CALCIUM | 47 | SODIUM |
| 4.6 | CHROMIUM | 0.90U | THALLIUM |
| 0.42U | COBALT | NA | TIN |
| 1.8 | COPPER | 6.9 | VANADIUM |
| 3000 | IRON | 4.5 | ZINC |
| 3.5 | LEAD | 12 | PERCENT MOISTURE |
| 130 | MAGNESIUM | | |

FOOTNOTES

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*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

METALS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91354 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 003-SS COLLECTION START: 10/27/94 1126 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: MD NUMBER: HQ61 **
**

| MG/KG | ANALYTICAL RESULTS | MG/KG | ANALYTICAL RESULTS |
|--------|--------------------|--------|--------------------|
| 1100J | ALUMINUM | 240J | MANGANESE |
| 2.90J | ANTIMONY | 0.120J | MERCURY |
| 2.00 | ARSENIC | 7.5 | NICKEL |
| 8.3 | BARIUM | 600U | POTASSIUM |
| 0.15J | BERYLLIUM | 0.70 | SELENIUM |
| 0.62J | CADMIUM | 0.47U | SILVER |
| 360000 | CALCIUM | 180 | SODIUM |
| 5.4 | CHROMIUM | 1.00 | THALLIUM |
| 2.2 | COBALT | NA | TIN |
| 3.5 | COPPER | 6.8 | VANADIUM |
| 2500 | IRON | 56 | ZINC |
| 6.9 | LEAD | 17 | PERCENT MOISTURE |
| 4500 | MAGNESIUM | | |

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

METALS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91355 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 004-SS COLLECTION START: 10/27/94 1138 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: MD NUMBER: HQ62 **
**

| MG/KG | ANALYTICAL RESULTS | MG/KG | ANALYTICAL RESULTS |
|--------|--------------------|--------|--------------------|
| 3100J | ALUMINUM | 260J | MANGANESE |
| 3.5UJ | ANTIMONY | 0.15UJ | MERCURY |
| 3.2 | ARSENIC | 17 | NICKEL |
| 65 | BARIUM | 480U | POTASSIUM |
| 0.20J | BERYLLIUM | 0.80U | SELENIUM |
| 2.0U | CADMIUM | 0.58U | SILVER |
| 290000 | CALCIUM | 310 | SODIUM |
| 16 | CHROMIUM | 1.2U | THALLIUM |
| 3.5 | COBALT | NA | TIN |
| 14 | COPPER | 30 | VANADIUM |
| 4400 | IRON | 290 | ZINC |
| 52 | LEAD | 31 | PERCENT MOISTURE |
| 3000 | MAGNESIUM | | |

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

METALS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91356 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 005-SD COLLECTION START: 10/27/94 1153 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: MD NUMBER: HQ63 **
**

| MG/KG ANALYTICAL RESULTS | | MG/KG ANALYTICAL RESULTS | |
|--------------------------|-----------|--------------------------|------------------|
| 2800J | ALUMINUM | 20J | MANGANESE |
| 3.30J | ANTIMONY | 0.14UJ | MERCURY |
| 3.0U | ARSENIC | 1.6J | NICKEL |
| 8.2 | BARIUM | 120U | POTASSIUM |
| 0.08J | BERYLLIUM | 0.8U | SELENIUM |
| 0.41U | CADMIUM | 0.54U | SILVER |
| 13000 | CALCIUM | 46 | SODIUM |
| 4.3 | CHROMIUM | 1.1U | THALLIUM |
| 0.58J | COBALT | NA | TIN |
| 3.5 | COPPER | 5.9 | VANADIUM |
| 1600 | IRON | 17 | ZINC |
| 5.6 | LEAD | 28 | PERCENT MOISTURE |
| 290 | MAGNESIUM | | |

FOOTNOTES

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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

METALS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91357 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 008-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE NUMBER: 22812 SAS NUMBER: MD NUMBER: HQ64 **

| MG/KG | ANALYTICAL RESULTS | MG/KG | ANALYTICAL RESULTS |
|-------|--------------------|--------|--------------------|
| 9600J | ALUMINUM | 15J | MANGANESE |
| 3.9UJ | ANTIMONY | 0.17UJ | MERCURY |
| 3.0U | ARSENIC | 3.5 | NICKEL |
| 22 | BARIUM | 310U | POTASSIUM |
| 0.12J | BERYLLIUM | 0.9U | SELENIUM |
| 0.48U | CADMIUM | 0.64U | SILVER |
| 710 | CALCIUM | 50 | SODIUM |
| 8.0 | CHROMIUM | 1.3U | THALLIUM |
| 0.92J | COBALT | NA | TIN |
| 2.4 | COPPER | 17 | VANADIUM |
| 4700 | IRON | 7.9 | ZINC |
| 17 | LEAD | 39 | PERCENT MOISTURE |
| 260 | MAGNESIUM | | |

FOOTNOTES

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TOTO2\$DISK:[ESAT]PRODCPCB.LST;1

TOTO2\$DISK:[ESAT]PRODCVOA.LST;1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV
Environmental Services Division
College Station Road, Athens, Ga. 30613

*****MEMORANDUM*****

DATE: 12/08/94

SUBJECT: Results of Specified Analysis;
95-0050 SEA GALLEY CLUB
GOOSE CREE SC
CASE NO: 22812

FROM: Charles H. Hooper
Chief, Laboratory Evaluation/Quality Assurance Section

TO: JOHN CRISWELL

Attached are the results of analysis of samples collected as part of the subject project.

As a result of the Quality Assurance Review, certain data qualifiers may have been placed on the data. Attached is a DATA QUALIFIER REPORT which explains the reasons that these qualifiers were required.

If you have any questions please contact me.

ATTACHMENT

INORGANIC DATA QUALIFIERS REPORT

Case Number: 22812
 Project Number: 95-0050
 Site: Sea Galley Club, Goose Creek, SC

| Element | Flag | Samples Affected | Reason |
|--------------------------|------|---|---|
| all samples | | | |
| As, Se, Zn | U | All positives >IDL but <CRDL | baseline instability |
| Al, Ca, Fe, Mn, Na, K, V | U | all positives >IDL but <10X blank contamination | postivies in blanks |
| Pb | J | All results with Fe or Al concentration in solution >86000ug/L | Suspected negative interference as noted in the contractor ICS |
| Tl | JN | All positives with Al or Fe concentrations in solution >88000ug/L | Suspected positive interference as noted in the contractor ICS |
| Ni | J | MDHQ59, 60, 63 | %RSD >20% for ICP multiple exposure |
| Co | J | MDHQ63, 64 | %RSD >20% for ICP multiple exposure |
| Cd | U | MDHQ62 | %RSD >20% for ICP multiple exposure and result >IDL but <CRDL |
| Be | J | MDHQ59, 60, 61, 62, 63, 64 | %RSD <20% for ICP multiple exposure and result >IDL but <CRDL |
| Cd | J | MDHQ61 | result >IDL but <CRDL and %RSD <20% for ICP multiple exposure |
| Be | J | MDHQ59, 60, 61, 62, 63, 64 | Only 2X CRDL standard analysis required by SOW for ICP analysis |
| Cd | J | MDHQ61 | only 2X CRDL standard analysis required by SOW for ICP analysis |
| Sb | J | all soils | matrix spike recovery 41.4% |
| Al | J | all soils | matrix duplicate RPD 38.6% |
| Mn | J | all soils | matrix duplicate RPD 76.9% |
| Pb | J | all negative soils | recovery of CRA standard only 5% |

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91352 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 001-SS COLLECTION START: 10/27/94 1055 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ59 MD NO: HQ59 **
**

RESULTS UNITS PARAMETER
3.7U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

SPECIFIED ANALYSIS DATA REPORT

```
***
** PROJECT NO. 95-0050  SAMPLE NO. 91353  SAMPLE TYPE: SOIL  PROG ELEM: NSF  COLLECTED BY: F.M. CARNS  **
** SOURCE: SEA GALLEY CLUB  CITY: GOOSE CREE  ST: SC  **
** STATION ID: 002-SS  COLLECTION START: 10/27/94  1115  STOP: 00/00/00  **
** CASE.NO.: 22812  SAS NO.:  D. NO.: HQ60  MD NO: HQ60  **
**
***
```

RESULTS UNITS PARAMETER
2.8U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

SPECIFIED ANALYSIS DATA REPORT

```
***
** PROJECT NO. 95-0050  SAMPLE NO. 91354  SAMPLE TYPE: SOIL  PROG ELEM: NSF  COLLECTED BY: F.M. CARNS  **
** SOURCE: SEA GALLEY CLUB  CITY: GOOSE CREE  ST: SC  **
** STATION ID: 003-SS  COLLECTION START: 10/27/94  1126  STOP: 00/00/00  **
** CASE.NO.: 22812  SAS NO.:  D. NO.: HQ61  MD NO: HQ61  **
**
***
```

RESULTS UNITS PARAMETER
3.0U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 95-0050 SAMPLE NO. 91355 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: F.M. CARNS **
** SOURCE: SEA GALLEY CLUB CITY: GOOSE CREE ST: SC **
** STATION ID: 004-SS COLLECTION START: 10/27/94 1138 STOP: 00/00/00 **
** CASE.NO.: 22812 SAS NO.: D. NO.: HQ62 MD NO: HQ62 **

RESULTS UNITS PARAMETER
3.6U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
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SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

SPECIFIED ANALYSIS DATA REPORT

```
*****  
** PROJECT NO. 95-0050 SAMPLE NO. 91356 SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: F.M. CARNS   **  
** SOURCE: SEA GALLEY CLUB                                CITY: GOOSE CREE   ST: SC   **  
** STATION ID: 005-SD   COLLECTION START: 10/27/94 1153   STOP: 00/00/00   **  
** CASE.NO.: 22812   SAS NO.:   D. NO.: HQ63   MD NO: HQ63   **  
**  
*****
```

RESULTS UNITS PARAMETER
3.5U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/94

SPECIFIED ANALYSIS DATA REPORT

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***
** PROJECT NO. 95-0050  SAMPLE NO. 91357  SAMPLE TYPE: SOIL  PROG ELEM: NSF  COLLECTED BY: F.M. CARNS  **
** SOURCE: SEA GALLEY CLUB  CITY: GOOSE CREE  ST: SC  **
** STATION ID: 008-SS  COLLECTION START: 10/27/94  1055  STOP: 00/00/00  **
** CASE.NO.: 22812  SAS NO.:  D. NO.: HQ64  MD NO: HQ64  **
**
***
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RESULTS UNITS PARAMETER
4.1U MG/KG CYANIDE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

TOTO2\$DISK:[ESAT]PRODTCLP.LST;1

TOTO2\$DISK:[ESAT]PRODVOAMISC.LST;1



**Preliminary Assessment Report
Sea Galley Club
SCD 987 566 452**

**Completed by: Jaye E. Young
Site Screening Section
Bureau of Solid and Hazardous Waste Management
South Carolina Department of Health and Environmental Control**

**Date completed:
June 21, 1990**

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I. INTRODUCTION

Jasin Travis purchased the lot on which the Sea Galley Club/Galley Hall is located in 1985. During Mr. Travis' years of operation, he did not operate a hazardous waste generator or storage facility. However, an isolated incident occurred in 1987 when he agreed to store some drums. In 1987 a man posing as a highway department worker asked to store some barrels of tar in Mr. Travis' paved parking lot. Because Mr. Travis did not realize the drums actually contained hazardous waste products, they remained on-site for about six months until an Environmental Quality Control district employee discovered the site. The drums were sampled and immediately removed, along with all visible soil contamination found in the area.

Waste samples taken from the drums revealed high concentrations of volatile organics. These drums were upgradient from a drainage ditch leading to Foster's Creek. Samples were not taken of surface water, groundwater, or soil on the site. The drainage ditch is thought to only have flowing water after a storm, although it is documented as a perennial stream.

Although approximately 335,511 people could potentially be affected by the site, the small amount of waste spilled was cleaned up and all the drums were removed. The contamination is not suspected to be high; therefore, the Sea Galley Club is given a low priority for a Site Screening Investigation (SSI).

II. SITE BACKGROUND AND HISTORY

A. Ownership History

Present Owner and Operator: 1985 to present

Jasin Travis

(b)(6) Personal Privacy

Mr. Travis purchased a wooded lot in 1985 and built the Sea Galley Club. He can not remember who owned it before that date (Ref. 25).

B. Site Description

The Sea Galley Site is located at 200 Eagle Road on the corner of Red Bank Road and Eagle Road in Goose Creek, S.C. (Ref. 18). The site is geographically positioned at 32 degrees, 58 minutes, 4.6 seconds north latitude and 080 degrees, 00 minutes, 16.7 seconds west longitude (Ref. 1, 2). A catering hall and the nightclub are the only two buildings on the

property. Behind these buildings lies a paved parking lot for these businesses (Ref. 18).

The Sea Galley Club property occupies about three acres of land in Goose Creek's business district. The waste drum site occupies part of the parking lot on the property (Ref. 3). The area around the Sea Galley Site is relatively flat, but does slant northwest toward a small, unnamed tributary/drainage ditch of Foster's Creek. This tributary flows about 45 feet from the site and empties 0.9 miles downstream into Foster's Creek (Ref. 2).

C. Regulatory History/RCRA Summary

Neither Sea Galley Club/Galley Hall nor Mr. Jasin Travis was ever issued a hazardous waste permit allowing treatment, storage, or disposal on-site. The owner and operator of the property did not know what the approximately 60 drums contained and did not notify SCDHEC of their existence. After EQC discovered the drums, Mr. Travis willingly complied with SCDHEC procedure. RCRA never became involved with the site, because Mr. Travis is not a hazardous waste facility (Ref. 12).

D. Process and Waste Disposal History

The Sea Galley Club/Galley Hall is a nightclub and catering business in the middle of a commercialized section of Goose Creek, S.C. Normally, the club does not handle hazardous wastes. However, in about September or October of 1987, a man posing as a highway department worker asked Mr. Travis' permission to store some barrels on his property. After leaving the drums on wooden pallets on the edge of the parking lot, the man was never seen again. About 60 drums, some open-top, some leaking, were found in March 1988 by SCDHEC and immediately removed. Two drums were found in a nearby drainage ditch and one of the them had fallen on its side. The contents of all the drums were found to be paints, paint solvents, and waste oil (Ref. 3, 4, 15, 18).

E. Removal/Remedial Action

In March 1988 the Willms Trucking Company in Charleston, S.C. was contracted by SCDHEC to sample and remove the drums stored on the Sea Galley Site (Ref. 4, 23). This company, which is now part of GSX, sampled five drums for the chemical composition of their contents. The analytical results revealed high concentrations of volatile organics in the hazardous waste filled drums (Ref. 24).

All of these drums were removed in March 1988 and taken to Willms transfer facility. Areas of visible soil contamination from a few leaking barrels was also scooped up and taken with the drums. The hazardous waste was later taken to an incinerator (Ref. 23, 25).

| Drums (ppm) | | | | | |
|------------------------|-----------|-----------|-----------|-----------|-----------|
| <u>Contaminant</u> | <u>#1</u> | <u>#2</u> | <u>#3</u> | <u>#4</u> | <u>#5</u> |
| Methylene chloride | 140 | | 3,000 | | |
| 1,1,1-trichloroethane | | | 800 | | |
| Acetone | 3,000 | 289,600 | 6,300 | 10,600 | |
| Ethyl acetate | 106 | | | | |
| Ethyl benzene | | 4,640 | 48,200 | 127,400 | 570 |
| Methanol | | | | 18 | |
| Methyl isobutyl ketone | 1,430 | 19,600 | 11,400 | 166,800 | 3,500 |
| Xylene | 6,740 | 56,600 | 42,700 | 50,500 | 400 |
| Toluene | 4,030 | 48,000 | 88,400 | 7,300 | 7,200 |
| Methyl ethyl ketone | | | 47,600 | 350 | |

(Ref. 19).

F. Demography/Regional Setting

Within the three mile radius, the land use is predominantly commercial and urban, although the U.S. Naval Reservation is located within this radius. The Naval Reservation occupies large expanses of underdeveloped land or forested areas. The Sea Galley Club is located in the business district of Goose Creek, S.C. (Ref. 2). No daycare centers or kindergartens are adjacent to the site. The site is entirely surrounded by land classified as potentially urban land, although about 405 acres of prime and about 218 acres of nearly prime farmland are located within one mile of the site (Ref. 13).

III. GROUNDWATER PATHWAY

A. Regional Hydrogeology

Underlying the Sea Galley Club site are the following geologic units: the Coastal Plain loose sediment, limestone and sand formations, and the deep metamorphic belt. South Carolina's Coastal Plain consists of an upper 0 to 25 feet layer of mixed sand, silt, clay, and shells. Extending between about 25 to 225 feet, the Cooper Formation is a sandy, phosphatic, dense, green-brown limestone. Light-colored, fossiliferous Santee Limestone exists between about 225 to 375 feet beneath the Cooper marl. Between 375 to 800 feet lies the interbedded argillaceous sand, limestone, and clay known as the Black Mingo. Compacted sand layers are situated between the Black Mingo and the fractured bedrock, which is estimated to be 2200 feet below the ground surface (Ref. 5,11).

The Cooper Formation acts as a confining layer for the Santee-Black Mingo Aquifer. This aquifer of concern lies about 225 feet below the land surface, and its predominant direction of groundwater flow is toward the southwest. The estimated depth to groundwater in the water table aquifer

is between 5 and 25 feet. In this loose sediment layer, the groundwater primarily flows toward the south and west (Ref. 5). Thus the direction of groundwater flow would be toward an unnamed tributary leading to the Goose Creek Reservoir. This tributary is about 3,150 feet southwest of the site (Ref. 2). The general direction of flow is unknown in the bedrock, although localized groundwater flow does occur in the bedrock fractures (Ref. 6). The hydraulic conductivity of the jointed bedrock could be as high as 10-5 cm/sec, while the Coastal Plain Sediments have an hydraulic conductivity range of 10-3 to 10-6 cm/sec (Ref. 5).

Annual precipitation and evaporation contribute to the hydrology of the area as well by affecting aquifer recharge and overland flow. Normal precipitation in Berkeley County equals approximately 48 inches (Ref. 10). However, rainfall varies seasonally, with the highest rate of precipitation in mid-summer and lowest in the winter. Seasonal evaporation peaks during the summer months (Ref. 11). The mean lake evaporation in Berkeley County is about 42 inches per year, thus yielding an average net precipitation of 6 inches per year (Ref. 10).

B. Groundwater Use

Although the Charleston Commissioners of Public Works require the use of city water, some homes are suspected of continuing to rely on private groundwater wells (Ref. 7). According to the Berkeley County Health Department, an estimated 95 private groundwater wells are in use within four miles of the site. Multiplied by 3.8 persons per home, about 361 people use private wells. The distance to the nearest private well is not known, however it is estimated to be greater than one mile (Ref. 26). Within the four mile radius, no groundwater irrigation is known to occur (Ref. 16).

C. Groundwater Impact

Groundwater sampling has not been performed on the Sea Galley Club Site or surrounding club property; therefore, the impact to groundwater is not known. A potential to impact the groundwater supply may exist, because some of the about 60 drums found on-site were open-top and could have splashed waste onto the ground surface during transportation to and from the site (Ref. 15, 18). However, the soils found on and around the Sea Galley Club have a slow to moderate permeability, slow surface runoff, and the available water capacity is high (Ref. 5, 21). The population potentially affected by the site's possible impact to groundwater is not known. However, 335,511 people use water taken from surface intakes within 1.7 miles of the site (Ref. 14, 20).

IV. SURFACE WATER PATHWAY

A. Regional Characteristics

The Sea Galley Club is located on three acres of South Carolina's Coastal Plain in Goose Creek (Ref. 2, 6). The change in elevation from the site to the drainage ditch leading to Foster's Creek is approximately five feet across about 45 feet distance, thus yielding a 11% intervening slope. The change in elevation across the site on the nightclub parking lot is about 5 feet over approximately a 50 feet distance, which yields a facility slope of 10% (Ref. 2).

Surface water drainage is west-northwest across the parking lot to this unnamed tributary. This tributary/drainage ditch flows 0.9 miles to enter Foster's Creek on the United States Naval Reservation (USNR). Approximately 5.2 miles downstream, Foster's Creek joins the Back River, which in turn flows about 0.6 miles to an earthen dam/causeway crossing the river. Up to this point the water is fresh and considered potable (Ref. 2). Another 0.6 miles downstream the Back River meets the Cooper River. Brackish water is found downstream from the causeway, but the salinity varies with upstream freshwater discharge from both the Cooper and Back Rivers. Salinity increases down the Cooper River, closer to the Atlantic Ocean. The 15 miles downstream limit ends where Filbin Creek enters the Cooper River about 7.7 miles from the Back River/Cooper River confluence. The Atlantic Ocean is only about 12 more miles downstream (Ref. 2, 17).

Surface water runoff varies with the rate of precipitation as well as slope characteristics. Berkeley County's one year - 24 hour rainfall equals 3.5 inches (Ref. 10). The two year - 24 hour rainfall in Berkeley County is 4.25 inches (Ref. 9). The upgradient drainage area is approximately 5.7 acres and includes the land south-southwest of the site (Ref. 2).

B. Surface Water Use

The source of public water for residents of Charleston, Berkeley, and Dorchester Counties is the Edisto River, which flows greater than 25 miles west of the Sea Galley Club site. In rural sections of Berkeley and Dorchester Counties away from cities, citizens do not use public water. They use private groundwater wells. The Edisto is not in the same watershed as the Goose Creek, Foster's Creek, or Cooper River watershed. However, during drier seasons, surface water is also taken from an intake valve on Foster's Creek about 1.7 miles downstream from the site. During emergencies, such as severe droughts, the surface water intake on the Goose Creek Reservoir is used as well. When these alternative intakes are utilized, the water from each source is mixed together with the others before being distributed to consumers. The Charleston Commissioners of Public Works is responsible for drawing this water and distributing it to Charleston, North Charleston, Ravenel, Hollywood, and Peterfield. This

company also sells its water wholesale to Berkeley County, Dorchester County, Goose Creek, Folly Beach, John's Island, James Island, the USNR, and the U.S. Air Force Base (Ref. 2, 7, 8). Therefore, any resident supplied by the Charleston Commissioners of Public Works, either directly or indirectly, could possibly receive Foster's Creek water. The population identified as receiving this water equals about 335,511 (Ref. 14).

Livestock do not use the creeks and rivers within 15 miles downstream. No farms or pastures exist within four miles of the site or within 15 miles downstream, so surface water irrigation is not a concern. The area around the Sea Galley Club is urban, except on parts of the U.S. Naval Reservation and in a few small forested areas north of Goose Creek, S.C. (Ref. 2, 13).

Recreational use of the streams meandering through the four mile radius and within 15 miles downstream is common. On the Back River and Foster's Creek, waterskiing is popular; freshwater fishing is common on the Back River, which contains primarily brim, bass and catfish. On the Cooper River, salt water fishing occurs, as well as heavy boat traffic such as waterski boats and sailboats (Ref. 17). Approximately 0.85 miles from the Sea Galley site on Foster's Creek is a freshwater wetland region which stretches the length of the creek and follows the Back River to the earthen dam/causeway. The entire area of this wetland region equals about 617 acres. After the dam, a potentially salt water wetland area follows both sides of the Cooper River downstream. This region's area up to the 15 mile/Filbin Creek downstream limit equals approximately 2680 acres (Ref. 2). A South Carolina state-listed, threatened bird species, Pandion haliaetus, is located northeast of the site near another branch of Foster's Creek and downstream within the three mile radius. The species' more common name is the American Osprey, and about 68 birds were discovered at 32 degrees, 58 minutes, 26 seconds north latitude and 079 degrees, 57 minutes 25 seconds west longitude (Ref. 2, 22).

C. Surface Water Impact

No surface water sampling has been conducted in the Foster's Creek tributary/drainage ditch flowing next to the Sea Galley Club; therefore, the impact to surface water is unknown. However, the potential to contaminate the stream existed, because two of these open-top drums were actually in the creek, and one of the drums had tipped over, presumably leaking an unknown quantity of waste into the surface water (Ref. 3, 18).

V. AIR PATHWAY

No air monitoring programs have been conducted on the Sea Galley Club Site; therefore, air quality is unknown on the site. Sampling of the drums revealed listed hazardous wastes such as paints, paint solvents, and waste oil constituents. Some of these barrels were open-top, so the potential to impact air quality exists due to emanating volatile organics. The drums and contaminated soil were removed and disposed of in March 1988 (Ref. 18, 19).

VI. ON-SITE EXPOSURE

A. Direct Contact Mode

The potential for direct, on-site exposure to hazardous chemicals on Sea Galley property existed for about six months prior to removal activities in March 1988. The property is not fenced-in and many of the drums did not have lids. Environmental Quality Control district officer Rick Richter stated some of the barrels were leaking onto the ground. However, all of the visible contaminated soil was removed with the drums. Therefore, even though the potential for exposure to these hazardous wastes was high during their six month stay on-site, since their removal the chances of direct contact have been reduced (Ref. 23).

No schools or daycares are adjacent to the Sea Galley Club site. However, a threatened bird species habitat is within three miles of the site. The American Osprey, Pandion haliaetus, lives northeast of the site on a Foster's Creek tributary (Ref. 22, 23).

B. Fire and Explosion Mode

The potential for a fire or explosion on the Sea Galley Club site due to these stored hazardous wastes no longer exists. The drums and contaminated soils were removed in March 1988. However, during the six months prior to their removal, the potential for a fire or explosion existed, even though no fire or explosion occurred throughout this time period (Ref. 23).

VII. CONCLUSIONS

It is estimated that a total of 335,511 people receive surface water from an intake on Foster's Creek at least part of the year. This number includes people from towns as far as twenty miles away, since the Charleston Commissioners of Public Works distributes water to three counties. The Sea Galley Club Site consisted of about 60 drums of paints, paint solvents, and waste oil stored on a paved parking lot behind the night club building. Some of these drums were open-top and leaking, and two drums were left in a drainage ditch on the property. SCDHEC had Willms Trucking Co. sample and remove the drums in March 1988.

Sampling of the drums' contents revealed high levels of volatile organic compounds in the wastes. Some of this waste had dripped onto the ground surface. The potential for anyone to come in direct contact with hazardous wastes was high prior to the drums' removal in March 1988. The site has no fence around it to inhibit access to dangerous substances. However, since the removal of the contamination source, the potential for direct contact has been reduced. This incident of hazardous waste storage was an isolated occurrence.

Sea Galley Club
SCD 987 566 452
Page 8

The extent of contamination in the soil is not known, but it is not suspected to be high. Due to the small quantity seen leaking from the drums and the removal of the drums and contaminated soil, the impact to the environment is suspected to be low. Therefore, the Sea Galley Club/Galley Hall Site is given a low priority for a Site Screening Investigation (SSI). It is recommended that someone from EQC re-examine the site to determine if all the contamination has been removed. However, the site does not warrant further CERCLA investigations.

VIII. REFERENCES

1. South Carolina Department of Health and Environmental Control (SCDHEC). Bureau of Solid and Hazardous Waste Management (BSHWM). CERCLA File: Sea Galley Club/Galley Hall, Berkeley County. Site Discovery Form. May 16, 1988. Copy attached.
2. United States Geological Survey, Topographical Map.

| | | |
|------------------------|-------------|------|
| Mount Holly, S.C. | 7.5 minutes | 1979 |
| Kittredge, S.C. | 7.5 minutes | 1979 |
| Ladson, S.C. | 7.5 minutes | 1979 |
| North Charleston, S.C. | 7.5 minutes | 1979 |
3. Young, Jaye E., Record of Communication (ROC) to the Sea Galley Club File. Conversation with Mr. Keith Lindler, Manager, Site Engineering Section. April 2, 1990. Copy attached.
4. Young, Jaye E., ROC to Sea Galley File. Conversation with Mr. Wayne Fanning, EQC District Office. May 2, 1990. Copy attached.
5. Canova, Judy, Hydrologist - SCDHEC/ Division of Hydrogeology BSHWM. Memorandum to John K. Cresswell, Manager, Site Screening Section. January 10, 1990. Copy attached.
6. Oldham, Richard W., "Designation of Aquifer Systems in the Piedmont Province of South Carolina." SCDHEC - Bureau of Water Supply and Special Programs. June, 1986.
7. Young, Jaye E., ROC to Sea Galley Club File. Conversation with Mr. Graham Rich, Public Works Department. May 1, 1990. Copy attached.
8. Young, Jaye E., ROC to Sea Galley Club File. Conversation with Mr. Graham Rich. May 2, 1990. Copy attached.
9. SC State Water Resources Commission. Two year-24 hour rainfall. Berkeley County.
10. NUS Corporation - Hazard Ranking System Manual. March, 1987. Pgs. SW-15, GW20-21.
11. SC State Water Assessment Manual - SC Water Resources Commission. September, 1983. Pgs. 54-55.
12. Young, Jaye E., ROC to Sea Galley Club File. Conversation with Mr. Keith Lindler concerning RCRA. June 4, 1990. Copy attached.
13. U.S.G.S.: Soil Conservation Service Farmland Map. Berkeley County, South Carolina. 1979.

14. SCDHEC - Bureau of Drinking Water Protection. Inventory of water supply. Computer printout dated February 13, 1989.
15. Young, Jaye E., ROC to Sea Galley Club File. Conversation with Norm Shumard, SCDHEC Criminal Investigator. May 21, 1990. Copy attached.
16. Young, Jaye E., ROC to Sea Galley Club File. Conversation with Calvert Sherard, Clemson Extension Agent. May 21, 1990. Copy attached.
17. Young, Jaye E., ROC to Sea Galley Club File. Conversation with Charlie Glover, Soil Conservation in Berkeley County. May 21, 1990. Copy attached.
18. SCDHEC - BSHWM. Investigation and Enforcement File: Criminal Investigation Report of Sea Galley Club Site, Berkeley County. March 25, 1988. Copy attached.
19. SCDHEC - BSHWM. CERCLA File: Sea Galley Club Site, Berkeley County. Hazardous waste sampling results. March 31, 1988. Copy attached.
20. Young, Jaye E., ROC to Sea Galley Club File. Conversation with Dixie Fanning concerning Foster's Creek surface water intake. May 22, 1990. Copy attached.
21. U.S. Department of Agriculture. Soil Survey of Berkeley County, S.C. January, 1980. General Soil Map and Pgs. 17, 19, 30.
22. SCDHEC - SC Heritage Trust Endangered Species List. Computer printout dated February 9, 1989.
23. Young, Jaye E., ROC to Sea Galley Club File. Conversation with Rick Richter, EQC Trident District. May 31, 1990. Copy attached.
24. Young, Jaye E., ROC to Sea Galley Club File. Conversation with Bob Pullano, General Engineering Labs. May 30, 1990. Copy attached.
25. Young, Jaye E., ROC to Sea Galley Club File. Conversation with Jasin Travis concerning site history. June 1, 1990. Copy attached.
26. Stewart, Gerald, ROC to Sea Galley Club File. Conversation with Barbara Macintosh concerning groundwater use. June 20, 1990. Copy attached.

PRELIMINARY ASSESSMENT
HAZARDOUS RANKING SYSTEM SCORING SUMMARY
FOR

EPA REGION: IV

SCORE STATUS: In preparation

SCORED BY: JAYE E. YOUNG
EMPLOYED BY: SC DHEC

DATE OF THIS REPORT: 06/22/90
DATE OF LAST MODIFICATION: 06/22/90

| | |
|----------------------------|-------|
| GROUND WATER ROUTE SCORE: | 20.00 |
| SURFACE WATER ROUTE SCORE: | 37.27 |
| AIR ROUTE SCORE: | 0.00 |

| | |
|------------------|-------|
| MIGRATION SCORE: | 24.45 |
|------------------|-------|

COMMENTS

The Sea Galley Club site had a known quantity of waste drums present on the property as of March 1988. However, they were removed since then, along with any visible soil contamination that was found. Therefore, a worst case scenario was not assumed.

SITE NAME: SAE GALLEY CLUB/GALLEY HALL SITE
HRS GROUND WATER ROUTE SCORE

Page 2 of 9

| CATAGORY/FACTOR | RAW DATA | ASN. VALUE | SCORE |
|---|---|------------|-------|
| 1. Observed release | N | 0 | 0 |
| Comments: | | | |
| No groundwater monitoring was performed on or near the property to test for a possible impact from the drums. However, the drums were removed, so potential threat to groundwater no longer exists. | | | |
| 2. Route Characteristics: | | | |
| Depth to Water Table | 5 feet | | |
| Comments: | Between 5 and 25 feet. | | |
| Depth to Bottom of Waste | 0 feet | | |
| Comments: | Waste spilled directly onto the ground surface. The visibly contaminated soil was removed. | | |
| Depth to Aquifer of Concern | 5 feet | 3 X 2 | 6 |
| Precipitation | 48.0 inches | | |
| Evaporation | 42.0 inches | | |
| Net Precipitation | 6 inches | 2 | 2 |
| Permeability | 1.0×10^{-3} cm/sec | 2 | 2 |
| Comments: | Coastal sediments: 1.0×10^{-3} to 1.0×10^{-6} cm/sec. Bedrock: 1.0×10^{-5} cm/sec. | | |
| Physical State | | 3 | 3 |
| Comments: | Leaky containers. | | |
| TOTAL ROUTE CHARACTERISTICS SCORE: | | | 13 |
| 3. Containment | | 3 | 3 |
| Comments: | Most of the drums were placed on wooden pallets on a paved parking lot. However, some of the drums without lids leaked onto the ground surface. Also, a nearby stream had two of these drums in it. | | |
| 4. Waste Characteristics: | | | |
| Toxicity/Persistence Matrix Value | | 12 | 12 |
| Substance scored: | 1,1,1-TRICHLOROETHANE | | |
| Comments: | Other chemicals present: acetone, methyl ethyl ketone, tolulene, ethyl acetate, and methanol. | | |

SITE NAME: SAE GALLEY CLUB/GALLEY HALL SITE
HRS GROUND WATER ROUTE SCORE

Page 3 of 9

(Continued)

| CATAGORY/FACTOR | RAW DATA | ASN. VALUE | SCORE |
|-----------------|----------|------------|-------|
|-----------------|----------|------------|-------|

4. Waste Characteristics: (Continued)

Other substances present:

METHYL ISOBUTYL KETONE

METHYLENE CHLORIDE

ETHYLBENZENE

XYLENE

Waste Quantity:

Cubic Yds 0

Drums 60

Gallons 0

Tons 0

| | | | |
|-------|-------------|---|---|
| Total | 15 Cu. yds. | 2 | 2 |
|-------|-------------|---|---|

Comments: Waste quantity reported by SCDHEC officials.

TOTAL WASTE CHARACTERISTICS SCORE: 14

5. Targets:

| | | |
|--------------------------------------|-------|---|
| Ground Water Use (Three mile radius) | 3 x 3 | 9 |
|--------------------------------------|-------|---|

Comments:

The groundwater system is not widely used to support the citizens of Charleston and Berkeley Counties. However, the water is considered potable, and a small quantity of homes still use private groundwater wells.

| | | |
|--------------------------|-----------|---|
| Distance to nearest well | 5821 feet | 2 |
|--------------------------|-----------|---|

Population Within 3 Miles:

Number of Houses 95 x 3.8

Number of Persons 0

Number of Connections 0 x 3.8

Number Irrigated Acres 0 x 1.5

| | | |
|-------------------------|-----|---|
| Total Population Served | 361 | 2 |
|-------------------------|-----|---|

| | | |
|---|----|----|
| Distance to Well/Population Served Matrix | 12 | 12 |
|---|----|----|

TOTAL TARGETS SCORE: 21

6. If line 1 is 45, multiply 1 x 4 x 5, & divide by 57.33 or if line 1 is 0, multiply 2 x 3 x 4 x 5, & divide by 57.33 to get Sgw

GROUND WATER ROUTE SCORE (Sgw) = 20.00

SITE NAME: SAE GALLEY CLUB/GALLEY HALL SITE
HRS SURFACE WATER ROUTE SCORE

Page 4 of 9

| CATAGORY/FACTOR | RAW DATA | ASN. VALUE | SCORE |
|---|------------|------------|-------|
| 1. Observed release | N | 0 | 0 |
| Comments: | | | |
| No surface water monitoring was performed on or near the site. The impact to surface water is unknown, although two drums were found in a nearby stream. | | | |
| 2. Route Characteristics: | | | |
| Site Located in S/W | .F. | | |
| Site Within Closed Basin | .F. | | |
| Facility Slope | 10.0 % | | |
| Intervening Slope | 11.0 % | | |
| Facility slope and intervening terrain | | 3 | 3 |
| 24-Hour Rainfall | 3.5 inches | 3 | 3 |
| Distance to Nearest S/W | 45 feet | 3 x 2 | 6 |
| Physical State of Waste | | 3 | 3 |
| Comments: Liquid and sludge. | | | |
| TOTAL ROUTE CHARACTERISTICS SCORE: | | | 15 |
| 3. Containment | | 3 | 3 |
| Comments: | | | |
| No known containment. One of the drums in the stream tipped over. | | | |
| 4. Waste Characteristics: | | | |
| Toxicity/Persistence Matrix Value | | 12 | 12 |
| Substance scored: METHYLENE CHLORIDE | | | |
| Comments: Other chemicals possibly in the water: acetone, toluene, ethyl acetate, methanol, and methyl ethyl ketone. | | | |
| Other substances present: | | | |
| 1,1,1-TRICHLOROETHANE | | | |
| ETHYLBENZENE | | | |
| METHYL ISOBUTYL KETONE | | | |
| XYLENE | | | |

SITE NAME: SAE GALLEY CLUB/GALLEY HALL SITE
HRS SURFACE WATER ROUTE SCORE

Page 5 of 9

(Continued)

| <u>CATAGORY/FACTOR</u> | <u>RAW DATA</u> | <u>ASN. VALUE</u> | <u>SCORE</u> |
|---------------------------------------|-------------------|-------------------|--------------|
| 4. Waste Characteristics: (Continued) | | | |
| Waste Quantity: | | | |
| Cubic Yds | 0 | | |
| Drums | 2 | | |
| Gallons | 0 | | |
| Tons | 0 | | |
| Total | <u>1 Cu. yds.</u> | 1 | 1 |

Comments: Waste quantity reported by SCDHEC officials.

TOTAL WASTE CHARACTERISTICS SCORE: 13

5. Targets:

Surface Water use
(Three miles Downstream) 3 x 3 9

Comments:
Surface water is used for public drinking water as well as heavy recreational use. This includes sailing, skiing, fishing, boating, and swimming.

Distance to:

Coastal Wetlands 35376 feet
Fresh-water Wetlands 4488 feet
Critical Habitat 27456 feet

Species Evaluated:

About 68 American Osprey, *Pandion haliaetus*, were found nesting in a tributary downstream from the site.

Sensitive Environments Score 1 x 2 2

Distance on Static Water 0 feet

Distance Water Supply Intake 8976 feet

Number of Houses 0 x 3.8
Number of Persons 335511
Number of Connections 0 x 3.8
Number of Irrigated Acres 0 x 1.5

Total Population Served 335511

Distance Water Intake/Population Matrix 30 30

TOTAL TARGETS SCORE: 41

SITE NAME: SAE GALLEY CLUB/GALLEY HALL SITE
HRS SURFACE WATER ROUTE SCORE

Page 6 of 9

(Continued)

6. If line 1 is 45, multiply $1 \times 4 \times 5$, & divide by 64.35 or
if line 1 is 0, multiply $2 \times 3 \times 4 \times 5$, & divide by 64.35 to get Ssw
-

SURFACE WATER ROUTE SCORE (Ssw) = 37.27

SITE NAME: SAE GALLEY CLUB/GALLEY HALL SITE
HRS AIR ROUTE SCORE

Page 7 of 9

| CATAGORY/FACTOR | RAW DATA | ASN. VALUE | SCORE |
|----------------------------------|----------|------------|-------|
| 1. Observed release Comments: | X | 0 | 0 |

2. Waste Characteristics:

Reactivity
Comments:

Incompatibility
Comments:

Toxicity:

Waste Quantity:
Cubic Yds
Drums
Gallons
Tons

Total _____ Cu. yds.

TOTAL WASTE CHARACTERISTICS SCORE:

3. Targets

Population Within 4-mile Radius

0 to 0.25 mile
0 to 0.50 mile
0 to 1.00 mile
0 to 4.0 miles

Distance to Sensitive Environments:

| | |
|----------------------|------|
| Coastal Wetlands | feet |
| Fresh-Water Wetlands | feet |
| Critical Habitat | feet |

Distance to Land uses:

| | |
|-------------------------|------|
| Commercial/Industrial | feet |
| Park/Forest/Residential | feet |
| Agricultural Land | feet |
| Prime Farmland | feet |

Historic Site Within View?

SITE NAME: SAE GALLEY CLUB/GALLEY HALL SITE
HRS AIR ROUTE SCORE

Page 8 of 9

(Continued)

| <u>CATAGORY/FACTOR</u> | <u>RAW DATA</u> | <u>ASN. VALUE</u> | <u>SCORE</u> |
|------------------------|-----------------|-------------------|--------------|
|------------------------|-----------------|-------------------|--------------|

TOTAL TARGETS SCORE:

4. Multiply 1 x 2 x 3

5. Divide line 4 by 35,100 and multiply by 100 to get Sa

AIR ROUTE SCORE Sa = 0.00

HAZARDOUS RANKING SYSTEM SCORING CALCULATIONS

FOR

AS OF: 06/22/90

Ground Water Route Score

```

-----
Observed Release      0
Route Characteristics 13
Containment           3
Waste Characteristics 14
Targets               21

```

$$11466 / 57,330 \times 100 = 20.00 \text{ Sgw}$$

Surface Water Route Score

```

-----
Observed Release      0
Route Characteristics 15
Containment           3
Waste Characteristics 13
Targets               41

```

$$23985 / 64,350 \times 100 = 37.27 \text{ Ssw}$$

Air Route Score

```

-----
Observed Release      0
Waste Characteristics
Targets

```

$$0 / 35,100 \times 100 = 0.00 \text{ Sa}$$

Summary of Migration Score Calculations

| | S | ² S |
|---|-------|-------------------|
| ----- | ----- | ----- |
| Ground Water Route Score (Sgw) | 20.00 | 400 |
| Surface Water Route Score (Ssw) | 37.27 | 1389.05 |
| Air Route Score (Sa) | 0.00 | 0 |
| ² Sgw + ² Ssw + ² Sa | | 1789.05 |
| Square Route of [² Sgw + ² Ssw + ² Sa] | | 42.30 |
| Square Route of [² Sgw + ² Ssw + ² Sa] | | |
| 1.73 | | = Sm: 24.45 |

OVERSIZED

DOCUMENT

SITE DISCOVERY FORM

Ref. 1

ACTION: A

EPA ID: SCD987566452

SOURCE: T (R=EPA, T=STATE)

SITE NAME: Sea Gullery Club / Sealery
Hall Site (40 chr. max.)

LOC. ADDRESS: Intersection of S-3-13
6 and S27 (40 chr. max.)

CITY NAME: Goose Creek
 (25 chr. max.)

ZIP CODE: 29445

COUNTY: Berkeley (15 chr. max.)

COUNTY CODE: 015 (optional)

CONG DIST: 06 (optional)

LATITUDE: 32°15'8.106.0"

LONGITUDE: 080°10'0.112.9"

SITE DESCRIPTION: Fifty waste drums at
waste plant, solvent and oil
is abandoned in a parking
lot
 (160 chr. max.)

DISTRICT NAME: Trident (10 chr. max.)

SITE DISCOVERY DATE: 05/16/87

REPORTED BY: Keith Bricker

REASON FOR LISTING: Potential Superfund
contamination from waste drums
in a parking lot at waste plant

Ref. 3

RECORD OF COMMUNICATION

____ Phone Call
____ Discussion
____ Field Trip
____ Conference
____ Other (specify)

TO: Sea Valley Club File

FROM: Jaye E. Young

DATE: April 2, 1990

TIME: 11:30 AM

SUBJECT: Keith Lindler, Manager, Site Engineering Division (BSHWM)
concerning general information.

SUMMARY OF COMMUNICATION

Mr. Lindler stated that the site consisted of about 70 drums of paint solvents, waste paints and oil left in the parking lot of this nightclub. Two drums were found in a tributary/drainage ditch of Fosters Creek as well. All the waste drums were immediately removed (in March 1988) from the 3 acre tract adjacent to the tributary. The area around the nightclub consisted of other small businesses and commercial enterprises. A paint and machinery plant exists a couple of blocks down the road from the nightclub. Two buildings, a night club and catering house, exist on the property. The paved lot and buildings only use about an acre and a half of the property.

Other people to call for information:

District Rich Richter,
 Wayne Panning

Criminal Investigators Norm Shumard,
 Hudson Waller

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

Ref. 4

RECORD OF COMMUNICATION

 X Phone Call
 Discussion
 Field Trip
 Conference
 Other (specify)

TO: Sea Galley Club File

FROM: Jaye E. Young

DATE: May 2, 1990

TIME: 3:15 PM

SUBJECT: Wayne Fanning, EQC Trident District (554-5533), concerning waste on-site.

SUMMARY OF COMMUNICATION

According to Mr. Fanning, a contractor was hired by DHEC to take samples of waste to determine the types of materials and their components. After the samples were taken, the drums were immediately removed. The source of the drums was suspected to be from an industry down the road, although this was never proved during the criminal investigation. The property owner was interviewed by SCDHEC's criminal investigator's as well, but no liability could be directly placed on the club owner or nearby industry.

During this time a taste problem developed in the drinking water in the area. However, samples taken of the water revealed components of gun powder not the expected paints and paint solvents present in the drums. A naval weapons station is near the surface water intake of Foster Creek.

Mr. Fanning suggested asking Ron Kinney about sampling results.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

South Carolina Department of Health and Environmental Control

Ref. 5

2600 Bull Street
Columbia, S.C. 29201

Commissioner
Michael D. Jarrett



Board
Henry S. Jordan, M.D., Chairman
John B. Pate, M.D., Vice-Chairman
William E. Applegate, III, Secretary
Toney Graham, Jr., M.D.
John H. Burriss
Richard E. Jabbour, D.D.S.
Currie B. Spivey, Jr.

MEMORANDUM

TO: John Cresswell, Manager
Site Screening Section
Division of Site Engineering and Screening
Bureau of Solid and Hazardous Waste Management

FROM: Judy Canova, Hydrologist *JC*
Superfund and Solid Waste Section
Division of Hydrogeology
Bureau of Solid and Hazardous Waste Management

DATE: January 10, 1990

RE: SAE Galley Club/Galley Hall Site
SCD 987 566 452
Berkeley County
Preliminary Assessment - Hydrogeologic Review

RECEIVED

A hydrogeologic review of the referenced site has been conducted to assist in completing a preliminary assessment for the Superfund program. The purpose of the hydrogeologic review is to provide information regarding the groundwater migration route of potential contaminants. It includes information obtained from South Carolina Water Resources Commission well tabulations, available site specific information from state files, a target survey using United States Geological Survey topographic quadrangles, and a literature review.

According to Park (1985), the following geologic units underlie the site:

| <u>Name</u> | <u>Description</u> | <u>Potential Yield</u> | <u>Depth of Occurrence</u> |
|--|---|----------------------------|--------------------------------|
| Shallow Undifferentiated Sediments | Heterogeneous mixture of sand, silt, clay, and shells | Unknown | 0' to 25' |
| Cooper Formation | Sandy phosphatic olive-green to brown dense limestone | N/A | 25' to 225' |

| | | | |
|------------------|---|---------|--------------|
| Santee Limestone | Light colored fossiliferous limestone | 350 gpm | 225' to 375' |
| Black Mingo | Interbedded argillaceous sand, limestone, and clay | 350 gpm | 375' to 800' |

The potential aquifer of concern includes the Santee/Black Mingo. The Cooper is a regionally recognized laterally extensive deposit of low hydraulic conductivity that likely restricts the vertical migration of groundwater (Park, 1985), although many wells in the Santee (Black Mingo) are of open hole construction which could provide a conduit for contaminant migration to the potential aquifer of concern. The depth to bedrock is estimated to be twenty-two hundred feet. The hydraulic conductivity of fractured bedrock in the area may be as high as 10^{-3} cm/s. The site is in an area with a potential for karst topography.

A well inventory within a radius of four miles of the site reveals the following uses of groundwater from the aquifer of concern: community and domestic water supply (Table 1). There are no alternate, readily available, unthreatened sources of groundwater in the four mile site radius.

The unsaturated zone is likely to consist dominantly of sand and clay. Sediments of this composition have an approximate saturated hydraulic conductivity of 10^{-3} to 10^{-4} cm/sec. Based on topographic relief and surface drainage, the depth to groundwater is estimated to be between five and twenty feet. The predominant groundwater flow direction appears to be towards the south and west in the shallow sediments. Groundwater flow direction in the Black Mingo/Santee is to the southwest (Aucott and Speiran, 1985).

cc: Christine Sanford

Table 1 p. 1 of 2

Gallagher Club / Gilley Hall Site

SELECTED COORDINATES: 324206/795513, 325406/795513, 325406/800513, 326206/800513

SELECTED RECORDS: ALL RECORDS WITHIN SELECTED COORDINATES

LOGS: D driller's L lithologic SP spontaneous potential G gamma LT 6 ft lateral C caliper O other
R resistance T temperature LM long normal (64 in res) N nuclear FB fluid resist SN short normal

Page No. 1

12/15/89

SURFACE / SUBSURFACE HYDROGEOLOGIC INFORMATION SYSTEM
APPRECIATED SOURCE INFORMATION
FOR
SOURCES LOCATED WITHIN SELECTED COORDINATES

| USGS ID | LOCAL ID #2 | LOCAL ID #1 | OWNER ADDRESS TELEPHONE | WELL TYPE / USE | LAT / LONG | ELEV TOTAL FT DEPTH MSL FT BLS | CASING DIAMETERS AND DEPTHS | INTAKE TOP / BOTTOM | WELL STATIC YIELD AT COMPLETE CONSTR FT BLS | LOGS | CORES OR CUTTINGS | USGS QUAD NAME | COMMENTS |
|------------|----------------|----------------|-------------------------------|--------------------------|------------------|--------------------------------------|--------------------------------------|------------------------------|---|------|-------------------------|----------------|--|
| CHN-0174 | 1800-E1 | Z 3344 | WESTVACO | WS | 325413 795913 | 40 361 | 6 198 0 0 0 0 | 0 0 | 0.00 07/04/67 D | | | | CAN'T LOCATE DC:ACKERMAN |
| CHN-0169 | 1900-D1 | Z 3419 | CHARLESTON AIRFORCE BASE | | 325424 800350 | 45 0 | 0 0 0 0 0 0 | 0 0 | 0.00 / / SN LM SP D | 1 | Y | | THREE COUNTY NUMBERS ASSIGNED TO SAME WELL SEE CHN 172 456 0535 IS 2260-125, TOWN OF EDISTO BEACH GEOTHERMAL TEST HOLE E V POOR |
| CHN-0525 | 1000-D1 | CHN-0456 | VPI&SU | AB | 325424 800350 | 45 1002 | 2 1002 0 0 0 0 | 0 0 | 0.00 07/04/81 T | 6 SN | | | |
| CHN-0213 | 1900-W1 | Z 3463 | JAMES KING | DO | 325503 800232 | 45 200 | 4 0 0 0 0 0 | 0 0 | 0.00 / / SN | | | | |
| CHN-0297 | 1980-W3 | Z 3547 | HUGHES MOTER LINES | IN | 325510 800200 | 40 265 | 4 86 0 0 0 0 | 0 115 | 0.00 07/04/78 D | | | | DC:ACKERMAN 0/5=2.7 HACH ANAL. 3/79 |
| CHN-0296 | 1980-W2 | Z 3546 | MIDLAND PARK ELEM. | UN | 325512 800228 | 40 359 | 6 82 0 0 0 0 | 0 40 | 0.00 07/03/52 D | | | | DC:ACKERMAN 0/5=4 |
| CHN-0298 | 1900-W4 | Z 3548 | TOM YOUNG'S | DO | 325525 800256 | 30 321 | 0 0 0 0 0 0 | 0 0 | 0.00 07/04/55 | | | | HACH A,CL, |
| BRK-0274 | 1800-M1 | Z 2697 | BERKELEY CTV. WATER | WS | 325747 795704 | 12 296 | 6 218 0 0 0 0 | 0 100 | 0.00 07/04/81 D G SN C | | | | GEO. SAMPLES |
| CHN-0096 | 1900-M1 | Z 3346 | SOUTHERN BELL | DO | 325757 800243 | 28 325 | 6 270 0 0 0 0 | 0 17 | 0.00 07/04/63 | | | | USGS SCH. 62 |
| CHN-0129 | 1000-F1 | Z 3379 | BAPTIST COLLEGE | AB | 325832 800410 | 25 353 | 6 0 0 0 0 0 | 0 0 | 0.00 07/04/67 | | | | USGS SCH. 66 |
| BRK-0130 | 1900-B1 | Z 2455 | TOWN OF GOOSE CREEK | WS | 325904 800122 | 30 0 | 6 50 0 0 0 0 | 0 0 | 0.00 / / | | | | UN |
| CHN-0212 | 1900-P2 | Z 2635 | TOWN OF GOOSE CREEK | WS | 325913 800115 | 25 0 | 0 0 0 0 0 0 | 0 0 | 0.00 / / | | | | AB |
| CHN-0212 | 1900-C2 | Z 2637 | TOWN OF GOOSE CREEK | WS | 325936 800255 | 42 323 | 6 95 0 0 0 0 | 0 220 | 0.00 07/03/64 | | | | AB |

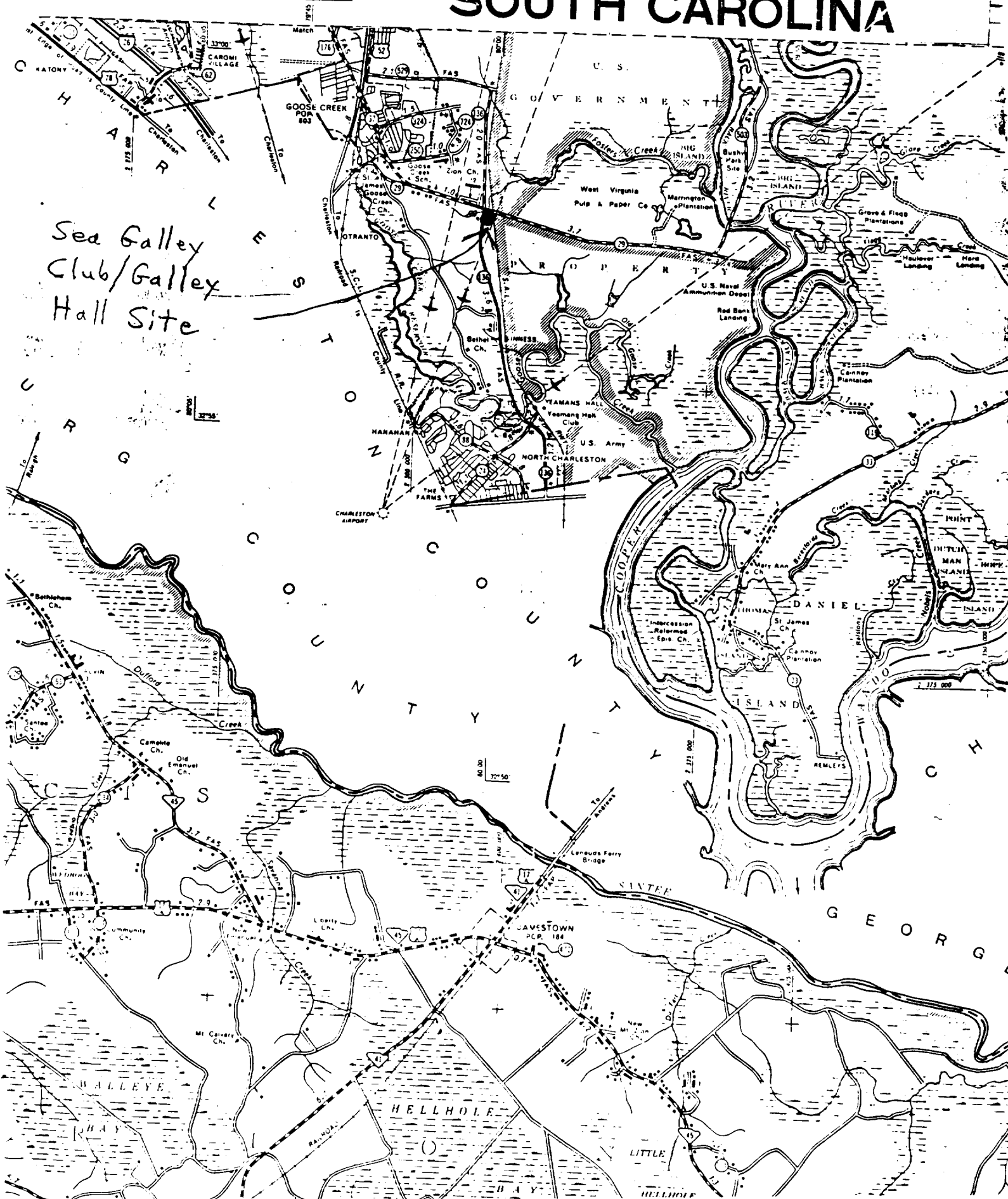
Table 1 p-2062.

Page No. 2
12/19/89

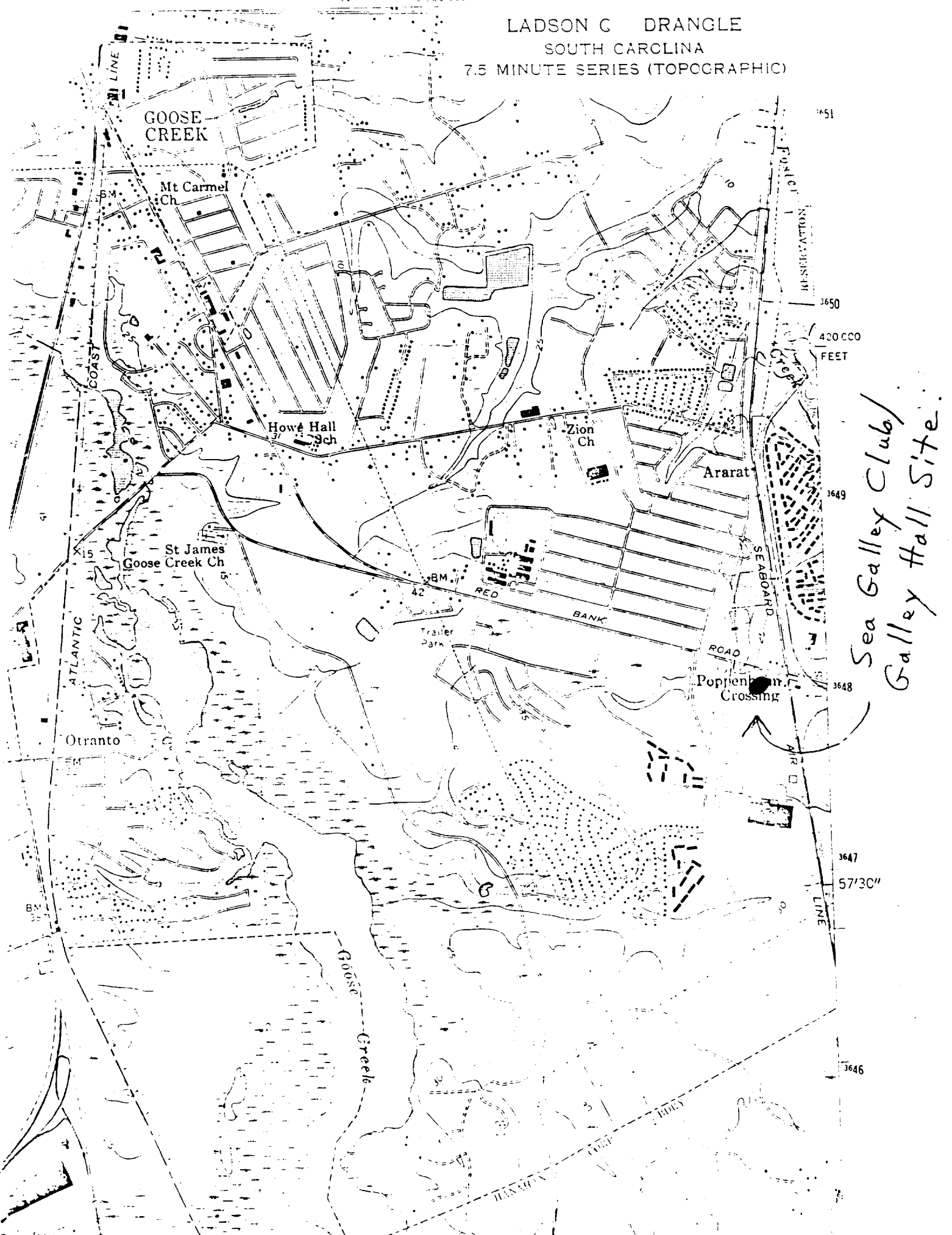
SURFACE / SUBSURFACE HYDROGEOLOGIC INFORMATION SYSTEM
ABBREVIATED SOURCE INFORMATION
FOR
SOURCES LOCATED WITHIN SELECTED COORDINATES

| SSS | LOCAL | LOCAL | OWNER | WELL | LAT | ELEV TOTAL | CASING | INTAKE | WELL STATIC | WELL | LOGS | CORES | USGS QUAD NAME | COMMENTS |
|----------|---------|--------|----------------------|-----------|------------------|------------------------|----------------------------|----------|--------------------------------|------------|------|----------------|----------------|-------------------|
| 12 | 10 02 | 10 01 | ADDRESS TELEPHONE | TYPE / | LONG | FT DEPTH MSL FT BLS | DIAMETERS AND DEPTHS | TOP / | YIELD AT COMPLETE CONSTR | FT BLS | | OR CUTTINGS | | |
| BAK-0213 | 1958-C1 | 2 2636 | TOWN OF GOOSE CREEK | US | 325938 800219 | 40 322' 8 | 10 0 0 0 | 0 0 | 326 0.00 | 07/04/65 D | | | | DC:ACKERMAN AB |
| BAK-0215 | 1958-C3 | 2 2638 | TOWN OF GOOSE CREEK | US | 325946 800249 | 40 310' 0 | 8 87 0 0 | 0 0 | 0 0.00 | 07/04/65 D | | | | DC:ACKERMAN AB |

BERKELEY COUNTY SOUTH CAROLINA



LADSON C DRANGLE
SOUTH CAROLINA
7.5 MINUTE SERIES (TOPOGRAPHIC)



Sea Galley Club /
Galley Hall Site

Ref. 7

RECORD OF COMMUNICATION

☐ Phone Call
☐ Discussion
☐ Field Trip
☐ Conference
☐ Other (specify)

TO: Sea Galley Club/
Galley Hall File

FROM: Dave E. Young

DATE: May 1, 1990

TIME: 8:50 AM

SUBJECT: Graham Rich, Coordinator of Water Systems, concerning Charleston County/Berkeley County water lines.

SUMMARY OF COMMUNICATION

According to Mr. Rich, public water is drawn from the Edisto River most of the time. Only during periods of high demand do they use the intake at the head of Foster's Creek. These sources are mixed together, however, when both are needed to supply the system. A third intake on the Goose Creek Reservoir is only used during emergencies. It has not been used in over 10 years, though it is kept in good working order just in case something did go wrong. Mr. Rich estimates about 70,000 - 80,000 retail meters are within his service area. He stated that all residences of the area are required to use public water, so any private groundwater wells would be for lawn irrigation only. He does not know of any existing drinking water wells.

The water company is actually called the Charleston Commissioners of Public Works, and the new phone number is 724-6000.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

Ref. 8

RECORD OF COMMUNICATION

 X Phone Call
 Discussion
 Field Trip
 Conference
 Other (specify)

TO: Sea Galley Club File

FROM: Jaye E. Young

DATE: May 2, 1990

TIME: 10:30 AM

SUBJECT: Graham Rich, Commissioner of Public Works, (724-6862) concerning water supply.

SUMMARY OF COMMUNICATION

Within the Charleston County district, Mr. Rich supplies retail meters for Charleston, North Charleston, Ravenel, Hollywood, and Peterfield. He also sells water wholesale to Berkeley County, Goose Creek, Dorchester County, Folly Beach, Johns Island, James Island, the Navy base, and the Air Force base.

Other people who possibly could answer questions are the following:

| | |
|---------------|------------------------|
| Jack Sullivan | 724-6846 (Charleston) |
| Johnny Askins | 797-6222 (Goose Creek) |

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

Ref. 12

RECORD OF COMMUNICATION

☐ Phone Call
☒ Discussion
☐ Field Trip
☐ Conference
☐ Other (specify)

TO: Sea Galley Club File

FROM: Jaye E. Young

DATE: June 4, 1990

TIME: 3:30 PM

SUBJECT: Keith Lindler, Manager of Site Engineering Section, concerning RCRA and Waste Disposal.

SUMMARY OF COMMUNICATION

Mr. Lindler stated that the drums and soil were taken to an incinerator at Thermo Organic Company in Spartanburg. Because the Sea Galley is not a generator of Hazardous Wastes, RCRA never became involved.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

RECORD OF COMMUNICATION

☒ Phone Call
☐ Discussion
☐ Field Trip
☐ Conference
☐ Other (Specify)

TO: Sea Galley Club File

FROM: Jaye E. Young

DATE: May 21, 1990

TIME: 1:30 PM

SUBJECT: Norm Shumard, BSHWM Enforcement Officer, concerning investigation of site.

SUMMARY OF COMMUNICATION

Mr. Shumard stated that the source of the 60 or so open-top drums of hazardous waste is unknown. Every lead as to the responsible party that left the drums in the Sea Galley parking lot turned out to be a deadend. He said nothing more was planned for the investigation of this site.

The owner and operator of the nightclub and parking lot is Mr. Jasin Travis of (b)(6) Personal Privacy. Mr. Travis told Mr. Shumard he had no idea where the drums came from or how they got there.

The area surrounding the nightclub is primarily commercial. The drums were found in the parking lot behind the building.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

RECORD OF COMMUNICATION

☒ Phone Call
☐ Discussion
☐ Field Trip
☐ Conference
☐ Other (Specify)

TO: Sea Galley Club File

FROM: Jaye E. Young

DATE: May 21, 1990

TIME: 11:00 AM

SUBJECT: Calvert Sherard, Clemson Extension Agent (761-8510) concerning wells.

SUMMARY OF COMMUNICATION

According to Mr. Sherard, some people in Goose Creek are still using private groundwater wells, although almost everyone is on the city system. all new houses going up have city water and sewer, however a few older homes did not make the switch yet. He suggested calling three people concerning the nearby creeks:

- 1) Mike Hertzler (Mayor of Goose Creek) 797-2992
- 2) Charlie Glover (Soil Conservation District) 761-8499
- 3) Gary Suber?/Stubing? (Parks & Recreation Dept) 572-1321

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

RECORD OF COMMUNICATION

☒ Phone Call
☐ Discussion
☐ Field Trip
☐ Conference
☐ Other (Specify)

TO: Sea Galley Club File

FROM: Jaye E. Young

DATE: May 21, 1990

TIME: 11:10 AM

SUBJECT: Charlie Glover, Soil Conservation District - Berkeley County
(761-8339), concerning nearby creeks.

SUMMARY OF COMMUNICATION

Mr. Glover stated that recreational use of the following rivers did occur extensively:

- 1) Back River - fishing, waterskiing
- 2) Foster's Creek - some waterskiing
- 3) Cooper River - fishing, waterskiing
- 4) Goose Creek - fishing, boating, crabbing (small scale)
- 5) Goose Creek Reservoir - fishing

The Back River, Foster's Creek, and the Goose Creek Reservoir are freshwater streams containing brim, bass, and catfish. Most freshwater fishing occurs on the Back River. The Cooper River and Goose Creek have the potential to be brackish, and the salinity would be a function of the amount of freshwater washing downstream to meet the tidal influx. The Cooper River has heavy recreational boat traffic on it, since it flows to meet the Ashley River in the Charleston Harbor.

Mr. Glover also said the surface water intake for the Charleston Commissioner's of Public Works dry season use is on the Back River. A dam divides this river into the freshwater side where the intake is and the brackish side which meets the Cooper River. He told me that the City of Goose Creek is built on top of a swampy area, and many ditches and creeks drain the ground surface into Foster's Creek on one side and Turkey Creek on the other side of the city.

The U.S. Navy also has some interest in the creeks. Foster's Creek flows through the middle of the Naval Reservation, which has several weapons stations and recreational centers along its channel. Several fishing ponds for the Navy men are built on the reservation, and these ponds drain into both Foster's Creek and the Cooper River.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

South Carolina Department of Health and Environmental Control REF. 18

2600 Bull Street
Columbia, S.C. 29201

Commissioner
Michael D. Jarrett



Board

Moses H. Clarkson, Jr., Chairman
Oren L. Brady, Jr., Vice-Chairman
Euta M. Colvin, M.D., Secretary
Harry M. Hallman, Jr.
Henry S. Jordan, M.D.
Toney Graham, Jr. M.D.

REPORT OF INVESTIGATION

FILE TITLE: Sea Galley
DATE: March 25, 1988
BY: Norman C. Shumard, Special Investigator
RE: Discovery of 60 Drums of Hazardous Waste

On March 22, 1988, Keith Lindler, Chris Locke and Investigator Shumard traveled to Charleston and met with Rick Richter at the Charleston District office. Richter had received information from a source at the Berkeley County Water and Sewer Authority that approximately 60 drums of suspected hazardous waste had been discovered in the driveway at the rear of a Restaurant/Lounge named the Sea Galley (later found to be located at 200 Eagle Road, Goose Creek, SC). At the site, Investigator Shumard met a Mr. Jason Travis, the owner of the Sea Galley. Mr. Travis stated

(b)(6) Personal Privacy and noticed that the barrels were there when (b)(6) Personal Privacy (b)(6) Personal Privacy He stated that during the Summer of 1987, a black man had come into the lounge and told him he was with the Highway Department and asked permission to temporarily unload some drums of "road tar" at the rear of the building (same spot where all 60 drums were located). According to Mr. Travis, he felt like the drums had belonged to the Highway Department and they would come back and get them.

The visual inspection of these drums revealed that many had been painted over with spray paint in an effort to obliterate any markings, labels and etc. However, many of the drums in the center of the group had not been painted over, as it appeared as if the ones spray painted were essentially the ones that could be easily reached on the periphery. The drums totaled 60 and all appeared full except one which was lying in an adjacent ditch. It appeared as if it had dumped out when it was rolled into the ditch. Another drum was also in the same ditch, however it was full. All of the drums either had borne or were bearing numbers which had been written in yellow spray paint. It appeared as if all had, at one time, been inventoried and possibly sampled. One drum, tan in color, was still strapped to a pallet. The drum was bearing a paper label which had been partially obliterated. It was determined that it was from Mobil Chemical Coatings Division.

Lettering on the top was partially visible and appeared to be "7 T34 Thinner flash point 104° MT1L 0195 (or 0193) IPL 42".

There were some drums which were from Texaco and were marked "Way Lube 200" and "Rando Oil HD 46 NF". Another drum was noted that had been marked Synacol Solvent. On March 23, 1988, Investigator Shumard talked with a Mr. Howard Wilson of Texaco, Houston, Texas, Telephone 713-650-5220. He furnished information that Rando Oil HD 46 NF is a high quality hydraulic oil which would be used in a hydraulic press or lift. He said that in its pure state, it is a lite oil yellowish in color. Mr. Wilson stated that Way Lube 220 is a highly adhesive lubricant that is used for lubricating the ways on a metal lathe and also used as a lubricant for broaching machinery. He indicated that such lubricants would be used by any large machine shop (inasmuch as the material had been in 55 gallon drums).

On March 24, 1988 Investigator Shumard was again at the site where he met with Rick Richter and Mr. Joseph Mansfield of Willms Trucking. Mr. Mansfield was present to supervise the loading up of the drums. Mr. Richter was accompanied by a representative of Tenneco, Mr. Bill Timms, who was formerly with Mobil Oil. Mr. Timms identified the Mobil Coatings drum as being solvent for two part epoxy paint, however was unable to further identify as to where the drum had originated from.

One drum in the center of the group bore lettering as follows "Magnaflux Corp. SKC-S Spotcheck Cleaner 55 gals. Gross wt. 409 lbs. 79 A003". This drum also bore the number 59, handwritten with yellow paint. At present, efforts are being made to determine the location of Magnaflux Corporation.

Another drum near the Magnaflux drum had been hand labeled "Synacol (or Synarol) Solvent". It had the number 58 hand painted on it, and was sitting next to the Magnaflux drum. By midday, on March 24, 1988, workers from Willms had loaded up all the drums and had left the site.

Investigation is continuing.



GENERAL ENGINEERING LABORATORIES

Ref. 19

Environmental Engineering and Analytical Services

Molly F. Greene
President

George C. Greene, P.E., Ph.D.
Vice President
SC Registration No. 9103

Laboratory Certifications:
FL ES7156/87294
NC 233
SC 10120
VA 00151
NACIP Approved

CERTIFICATE OF ANALYSIS

CLIENT: WILLMS TRUCKING CO.
7117 CROSS COUNTY RD
CHARLESTON, SC 29405

DATE: 04/12/88

CONTACT: MR. STEVE EVANS

RELEASED BY:

A.M. Crane
ALLAN M. CRANE

CC/FC: WLMS/WLMS2

PAGE NO.: 1

| SAMPLE ID | 033188- GCHD-01 | 033188- GCHD-02 | 033188- GCHD-03 | 033188- GCHD-04 |
|------------------------|--------------------|--------------------|--------------------|--------------------|
| LAB ID | 88031356 | 88031357 | 88031358 | 88031359 |
| SAMPLE TYPE | 14 | 14 | 14 | 14 |
| DATE RECEIVED | 03/31/88 | 03/31/88 | 03/31/88 | 03/31/88 |
| PARAMETER COLLECTED BY | WLMS | WLMS | WLMS | WLMS |

| PARAMETER | 033188- GCHD-01 | 033188- GCHD-02 | 033188- GCHD-03 | 033188- GCHD-04 |
|--------------------------------|--------------------|--------------------|--------------------|--------------------|
| FLASH POINT, closed cup (>200) | 113 F | 88 F | 77 F | 87 F |
| HEATING VALUE, Btu/lb | 18500 | <500 | 15600 | 16600 |
| PH - LAB | 7.50 @ 23C | 9.00 @ 23C | 7.00 @ 23C | 8.50 @ 23C |
| SPECIFIC GRAVITY | 0.874 | 0.962 | 0.859 | 0.897 |
| ARSENIC | <1.00 ppm | <1.00 ppm | <1.00 ppm | <1.00 ppm |
| BARIUM | <1.00 ppm | <1.00 ppm | <1.00 ppm | <1.00 ppm |
| CADMIUM | <0.50 ppm | <0.50 ppm | <0.50 ppm | <0.50 ppm |
| CHROMIUM | <1.00 ppm | <1.00 ppm | <1.00 ppm | <1.00 ppm |
| LEAD | <1.00 ppm | <1.00 ppm | <1.00 ppm | <1.00 ppm |
| MERCURY | <0.20 ppm | <0.20 ppm | <0.20 ppm | <0.20 ppm |
| SELENIUM | <0.50 ppm | <0.50 ppm | <0.50 ppm | <0.50 ppm |
| SILVER | <1.00 ppm | <1.00 ppm | <1.00 ppm | <1.00 ppm |
| DIGESTION FOR MERCURY ANALYSIS | YES | YES | YES | YES |
| EP TOX EXTRACTION-SOLID | | | YES | YES |
| EP TOX EXTRACTION-LIQUID | YES | YES | | |
| F001 LISTED WASTES | | | | |
| CARBON TETRACHLORIDE | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| METHYLENE CHLORIDE | 140 ppm | <10 ppm | 3000 ppm | <10 ppm |
| TETRACHLOROETHYLENE | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| 111 TRICHLOROETHANE | <10 ppm | <10 ppm | 800 ppm | <10 ppm |
| TRICHLOROETHYLENE | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| 122TRICHLORO122TRIFLUOROETHANE | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| TRICHLOROFLUOROMETHANE | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| F002 LISTED WASTES | | | | |
| CHLOROBENZENE | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| 12 DICHLOROBENZENE | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| METHYLENE CHLORIDE | 140 ppm | <10 ppm | 3000 ppm | <10 ppm |
| F003 LISTED WASTES | | | | |
| ACETONE | 3000 ppm | 289300 ppm | 6300 ppm | 10600 ppm |
| N-BUTYL ALCOHOL | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| CYCLOHEXANONE | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| ETHYL ACETATE | 106 ppm | <10 ppm | <10 ppm | <10 ppm |
| ETHYL BENZENE | <10 ppm | 4640 ppm | 48200 ppm | 127400 ppm |



GENERAL ENGINEERING LABORATORIES

Environmental Engineering and Analytical Services

Molly F. Greene
President

George C. Greene, P.E., Ph.D.
Vice President
SC Registration No. 9103

Laboratory Certifications:
FL ES7156/87294
NC 233
SC 10120
VA 00151
NACIP Approved

CERTIFICATE OF ANALYSIS

CLIENT: WILLMS TRUCKING CO.
7117 CROSS COUNTY RD
CHARLESTON, SC 29405
CONTACT: MR. STEVE EVANS

DATE: 04/12/88

CC/FC: WLMS/WLMS2

PAGE NO.: 2

| | | | | |
|------------------------|----------------------|--------------------|--------------------|--------------------|
| SAMPLE ID | : 033188- GCHD-01 | 033188- GCDH-02 | 033188- GCHD-03 | 033188- GCHD-04 |
| LAB ID | : 88031356 | 88031357 | 88031358 | 88031359 |
| DATE RECEIVED: | 03/31/88 | 03/31/88 | 03/31/88 | 03/31/88 |
| ETHYL ETHER | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| METHANOL | <10 ppm | <10 ppm | <10 ppm | 18 ppm |
| METHYL ISOBUTYL KETONE | 1430 ppm | 19600 ppm | 11400 ppm | 166800 ppm |
| XYLENE | 6740 ppm | 56600 ppm | 42700 ppm | 50500 ppm |
| F004 LISTED WASTES | | | | |
| O-CRESOL | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| M-CRESOL | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| P-CRESOL | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| CRESYLIC ACID | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| NITROBENZENE | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| F005 LISTED WASTES | | | | |
| CARBON DISULFIDE | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| ISOBUTANOL | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| METHYL ETHYL KETONE | <10 ppm | <10 ppm | 47600 ppm | 350 ppm |
| PYRIDINE | <10 ppm | <10 ppm | <10 ppm | <10 ppm |
| TOLUENE | 4030 ppm | 48000 ppm | 88400 ppm | 7300 ppm |



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|-------|--------------|
| FL | ES7156/S7294 |
| NC | 233 |
| SC | 10120 |
| VA | 00151 |
| NACIP | Approved |

CERTIFICATE OF ANALYSIS

CLIENT: WILLMS TRUCKING CO.
7117 CROSS COUNTY RD
CHARLESTON, SC 29405

DATE: 04/12/88

CONTACT: MR. STEVE EVANS

RELEASED BY:

A.M. Crane
ALLAN M. CRANE

CC/FC: WLMS/WLMS2

PAGE NO.: 1

SAMPLE ID : 033188-
GCHD-05

LAB ID : 88031360

SAMPLE TYPE : 14

DATE RECEIVED: 03/31/88

PARAMETER COLLECTED BY : WLMS

| | |
|--------------------------------|-----------|
| FLASH POINT, closed cup (>200) | 131 F |
| ARSENIC | <1.00 ppm |
| BARIUM | <1.00 ppm |
| CADMIUM | <0.50 ppm |
| CHROMIUM | <1.00 ppm |
| LEAD | <1.00 ppm |
| MERCURY | <0.20 ppm |
| SELENIUM | <0.50 ppm |
| SILVER | <1.00 ppm |
| DIGESTION FOR MERCURY ANALYSIS | YES |
| EP TOX EXTRACTION-SOLID | YES |
| F001 LISTED WASTES | |
| CARBON TETRACHLORIDE | <10 ppm |
| METHYLENE CHLORIDE | <10 ppm |
| TETRACHLOROETHYLENE | <10 ppm |
| 111 TRICHLOROETHANE | <10 ppm |
| TRICHLOROETHYLENE | <10 ppm |
| 122TRICHLORO122TRIFLUOROETHANE | <10 ppm |
| TRICHLOROFLUOROMETHANE | <10 ppm |
| F002 LISTED WASTES | |
| CHLOROBENZENE | <10 ppm |
| 12 DICHLOROBENZENE | <10 ppm |
| METHYLENE CHLORIDE | <10 ppm |
| F003 LISTED WASTES | |
| ACETONE | <10 ppm |
| N-BUTYL ALCOHOL | <10 ppm |
| CYCLOHEXANONE | <10 ppm |
| ETHYL ACETATE | <10 ppm |
| ETHYL BENZENE | 570 ppm |
| ETHYL ETHER | <10 ppm |
| METHANOL | <10 ppm |
| METHYL ISOBUTYL KETONE | 3500 ppm |
| XYLENE | 400 ppm |



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CONTACT: MR. STEVE EVANS

DATE: 04/12/88

CC/FC: WLMS/WLMS2

PAGE NO.: 2

SAMPLE ID : 033188-
GCHD-05

LAB ID : 88031360
DATE RECEIVED: 03/31/88

F004 LISTED WASTES

| | |
|---------------|---------|
| O-CRESOL | <10 ppm |
| M-CRESOL | <10 ppm |
| P-CRESOL | <10 ppm |
| CRESYLIC ACID | <10 ppm |
| NITROBENZENE | <10 ppm |

F005 LISTED WASTES

| | |
|---------------------|----------|
| CARBON DISULFIDE | <10 ppm |
| ISOBUTANOL | <10 ppm |
| METHYL ETHYL KETONE | <10 ppm |
| PYRIDINE | <10 ppm |
| TOLUENE | 7200 ppm |

RECORD OF COMMUNICATION

☒ Phone Call
☐ Discussion
☐ Field Trip
☐ Conference
☐ Other (Specify)

TO: Sea Galley Club File

FROM: Jaye E. Young

DATE: May 22, 1990

TIME: 10:30 AM

SUBJECT: Dixie Fanning, Charleston Commissioner's of Public Works (553-3957), concerning surface water intake on Foster's Creek.

SUMMARY OF COMMUNICATION

Ms. Fanning called today to describe two full 55 gallon drums the Public Works Dept. noticed near their intake on Foster's Creek. She said the drums were about 100 feet from the intake on U.S. Navy property, and their contents are unknown. However, she suspects some kind of diesel fuel or related product, because the drums, although they are unmarked, are near a navy plant that uses that type of fuel. Samples she took in the creek do not reveal any contaminants so she does not believe these drums are leaking. She is concerned about their potential to contaminate due to their proximity to the surface water intake on Foster's Creek. The intake is located about 3.8 miles upstream from the confluence of Back River and Foster's Creek, not on the Back River as previously thought. An industrial surface water intake does draw from the Back River near the dam/causeway, however.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

Ref. 23

RECORD OF COMMUNICATION

 X Phone Call
 Discussion
 Field Trip
 Conference
 Other (specify)

TO: Sea Galley Club File

FROM: Jaye E. Young

DATE: May 31, 1990

TIME: 1:35 PM

SUBJECT: Rick Richter, EQC Trident District (554-5533), concerning drums found on-site.

SUMMARY OF COMMUNICATION

According to Mr. Richter, the site has been cleaned up - all drums were removed and any dirt with spilled waste on it was scooped up. During the drums' stay on Mr. Jasin Travis' property (about six months), they were on wooden pallets on top of a paved parking lot. Only a few of these closed drums were leaking and all the contaminated dirt on the edge of the lot was taken when the drums were removed. One drum was found over turned in a drainage ditch next to the parking lot. However, this ditch is not perennial; water flows in it when it rains. The ditch does flow to Foster's Creek, though.

Willms Trucking Co. (now GSX) took these drums to a transfer facility to sample and analyze the drum contents. Paint solvents were determined to be the most abundant chemicals. These drums were later taken to an incinerator.

A fire or explosion never occurred on-site due to the drums. No one came in direct contact with the waste that Mr. Richter knows of. No daycare centers or kindergartens are adjacent to the site. The site does not have a fence around it. A car body shop is located upstream on the ditch from the site. Across the ditch is a storage facility with the individual storage units. Across the road and railroad tracks is a filling station and the start of the U.S. Naval Weapons Stations.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

RECORD OF COMMUNICATION

☒ Phone Call
☐ Discussion
☐ Field Trip
☐ Conference
☐ Other (specify)

TO: Sea Galley Club File

FROM: Jaye E. Young

DATE: May 30, 1990

TIME: 10:55 AM

SUBJECT: Bob Pullano, General Engineering Laboratories ((803) 556-8171) in Charleston, SC concerning type of samples taken.

SUMMARY OF COMMUNICATION

Mr. Pullano stated that the samples taken on the Sea Galley Club site by DHEC and analyzed by General Engineering were considered hazardous wastes. He said the samples were mostly oil and were taken from barrels. Another worker at GEL, Cherie Pittillo, identified these samples as hazardous wastes as well.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

Ref. 25

RECORD OF COMMUNICATION

☒ Phone Call
☐ Discussion
☐ Field Trip
☐ Conference
☐ Other (Specify)

TO: Sea Galley Club File

FROM: Jaye E. Young

DATE: June 1, 1990

TIME: 10:13 AM

SUBJECT: Jasin Travis , owner of Sea Galley Club, Concerning site history.
(b)(6) Personal Privacy

SUMMARY OF COMMUNICATION

Mr. Travis bought the property in 1985 and began operation after clearing the lot and building his club. The property originally was covered with trees. He does not know who owned the property before this date or what activities, if any, occurred on it. He does not have any groundwater wells on his property. He never received waste drums for storage before the 1988 incident and has not received any since.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES

TO:

Ref. 26

RECORD OF COMMUNICATION

☒ Phone Call
☐ Discussion
☐ Field Trip
☐ Conference
☐ Other (Specify)

TO: Sea Galley Club File

FROM: Gerald Stewart/
Jaye Young

DATE: June 20, 1990

TIME: 2:15 PM

SUBJECT: Barbara Macintosh, Berkeley County Health Dept. (761-8091),
concerning groundwater use.

SUMMARY OF COMMUNICATION:

Ms. Macintosh said several homes on Old Back River Road and Liberty Hill Road did us private groundwater wells. She confirmed Mr. Stewart's estimate of approximately 50 homes plus three mobile home parks with a total of about 45 trailers present in the area. They agreed the nearest well to the site was probably greater than one mile away.

CONCLUSIONS, ACTIONS TAKEN OR REQUIRED:

INFORMATION COPIES TO: